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L. T. RIESMEYER, M.D.,

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

The Alkaloids—Their Value in Therapeutics.

BY W. W. HIPOLITE, M.D, DE VALL'S BLUFF, ARK.

(Prepared for Prairie Co. Med. Society.)

MR. PRESIDENT AND GENTLEMEN:—In submitting to you this paper on the subject of the alkaloids and their use in therapeutics, I wish to state that, in its preparation, I have not hesitated to call freely from such literature bearing on the subject as I had at hand, where the language used is such as to clearly elucidate the subject which I wish to bring before you.

Medicinal plants from which are obtained such natural products or crude drugs as, for example, opium, digitalis, aconite, strychnia, etc., present variations in activity and power—owing to difference in quantity and quality of their active ingredients. This variability depends on several causes, such as the locality of growth, character of soil, whether grown in the wild or cultivated state, mode of culture, time and manner of gathering, age of samples, state of preservation, etc. The natural products themselves, and their preparations the most simple in appearance, are very complex and contain numerous active substances entirely different in their nature, and often of antagonistic medicinal qualities. Some plants which are very active in their wild state, are almost inert when cultivated; and some contain a number of alkaloids, differing from each other in properties. One of the most striking examples of this is that furnished by opium, careful studies of which have revealed the presence of six well defined principal alkaloids—and nearly twice that number of minor importance—having different and well defined properties. Narceine, morphine and codeine are soporific; while papaverine, thebeine and narcotine are antispasmodic. It is evident that powders, pills, decoctions, infusions, tinctures and extracts which may be prepared from such crude drugs cannot present uniformity in activity, and cannot be considered safe and reliable preparations. In fact, their unreliability has been shown by many unexpected results from their use; and this has caused such distrust and vacillation on the part of the physician as often to nullify his efforts in the treatment of disease.

Perhaps one of the most perplexing things with which the physician has to contend, is the great variation in the strength of drugs; and especially is this true in relation to those which come from the vegetable kingdom. So varied are these that the physician who trusts to prescription writing feels that the method of sending out his prescriptions to be filled is very unsatisfactory and unsafe. On the one hand the drug dispensed may be of poor quality, and the desired effect is not, therefore, produced; and, on the other hand, it may be stronger than what he has been in the habit of prescribing; and hence he receives from it the toxical effect. On this account many physicians have adopted the method of dispensing their own drugs, not so much in the belief that they can keep better drugs than their druggists; but that, having tested their own, they know just how much it will take to produce the desired effect. For instance, we are much annoyed in prescribing tincture of Aconite Root. It is not uncommon to find this tincture in the shops having little evidence of medicinal power. When aconite root lays away for any length of time it loses its properties; and a tincture made of such will be proportionally weak. It will take a large quantity of this to have any beneficial effect; and, after using for a time, we may prescribe a large quantity, when, if the prescription falls into the hands of a druggist who has a tincture of full strength, disaster may be the consequence. What the physician desires is, that neither too little nor too much of the active principles of drugs shall enter into the preparations he prescribes.

Therapeutics, to be successful, must have pure, active and always reliable agents. To secure this, and avoid mistakes, it was proposed some years ago that a certain amount of fluid extract should answer to a definite amount of the crude material; and, with this, it was thought that the ultimatum had been reached. But we find that the same difficulty attends the fluid extracts as above alluded to in the tinctures; and that we cannot expect to get a good fluid extract from a poor quality of the crude material. As the activity of a drug is due to one or more definite active principles contained in it, an estimation of these active ingredients is the only true criterion by which to judge of its medicinal quality;

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and this is subject, even in carefully selected drugs, to a wide variation.

The following is a brief abstract of some conclusions presented by the eminent Prof. Leaborde before the French Academy of Medicine.

1. "In every medicamentous preparation, taken from the vegetable kingdom, there exists one or several active substances through which it exercises its physiological and therapeutic action."

2. "When this active substance has been isolated, determined and chemically formulated, in which case it must be regarded as its proximate principle, it is this to which it would be reasonable for us to address ourselves, with a view to its therapeutic use, after having first subjected it to experimental and then to rigid clinical tests."

3. "In fact, while the proximate principle is always the same, identical with itself, invariable in its essential constitution, as in its fundamental, physiological and medicamentous action, the substance of the entire plant is essentially complex and variable, not only in its composition, but in its effects, and it does not and cannot result in actions which shall be other than multiple, diverse, undefined and unknown."

In the progress of preparing remedies we had, first, the crude drugs; next, decoctions and infusions made from them; then followed the tinctures, the fluid and the solid extracts. Here science halted for a long time, and until chemistry came to our aid by furnishing us with the active principles themselves, leaving out the coarse, inert, and often injurious matters that hinder ocurate calculations as to definite therapeutic results. We were given the alkaloids and the glucosides in place of the crude drugs and their preparations so long in use.

The alkaloids are the active principles of plants, isolated from their inert and extraneous parts by chemical processes. For example, strychnine and brucine are extracted from nux vomica; morphine, codeine and others from opium; aconitine from aconite; digitaline from digitalis; atropia from belladonna, etc. They are simple, pure and active drugs, always identical in chemical composition and uniform in strength and activity. With the exception of a small number, such as quinine, morphine and strychnine, which had been adopted into general practice, the alkaloids were at first looked upon as scientific curiosities; and were put away among the poisons. As medicinal agents they were regarded with suspicion, and were used in a timid and uncertain manner. But, instead of being the venomous principles of the plants which produce them, they are found to be the true medicinal agents of such plants, capable of rendering the greatest service to humanity; and these services will become general in proportion as their importance becomes more generally understood.

These active principles, as now presented for administration, are rapidly absorbed into the system, producing prompt and certain effects; and there are no effects produced by the crude drugs that may not be obtained from their alkaloids, singly or in combination, and in a far more positive and safe manner. Their undeniable efficaciousness in the hands of the intelligent physician is now widely recognized; and in them the medical art has a power, a certainty and precision of action which has been most earnestly desired, but was far from being expected. It is difficult to understand why physicians should persist in prescribing medicines of whose strength they cannot be certain, and whose conglomerate nature causes them daily anxiety, when they have definite active principles, invariable in their composition and whose medicinal effects are constant, and may in advance be mathematically counted upon. In satisfying therapeutic indications, the alkaloids have a very great superiority over plants, even as atropia is superior to belladonna, strychnia to nux vomica. Because of the uncertainty of their composition and their variability in activity, the crude drugs are more dangerous and less efficient in therapeutic use, than are their active principles. We may do without the plant itself, as such, but we cannot do without its active principle.

The discovery of the alkaloids is one of the most important discoveries of our time. The glory of the discovery belongs to chemistry, a science to which medicine, no less than the great modern group of arts and industries, is indebted for its most powerful instruments. It is to physiology that we are indebted for a knowledge of their influence on the vital economy; and to therapeutics for a knowledge of their great value in the treatment of disease.

In therapeutics we seek an effect. To be effectual therapeutics should be preventive, not limited to the prevention of death, but prevention of the phenomena which lead to death. Certain of the alkaloids, by their power in controlling the vaso-motor nerves, that part of the nervous system which presides over the contractions and dilatations of the blood vessels are regulators of vitality, modifying it according to the action peculiar to each agent. In small doses, repeated at short intervals, they lower the pulse and temperature, and prevent paralysis of the bloodvessels. When a person becomes feverish, the temperature of the body rises and the heart's action is hurried; the blood becomes overheated, dark and viscous; embarrasments of circulation in the organs are liable to happen and cause serious organic lesions. The system may become poisoned by retained morbid matters, the heart exhausted and life endangered. Every acute disease is, at the start, but a derangement of function, the vital phenomena are modified before the occurrence of any structural alteration of tissue of the organs. The alkaloids, given with promptness and boldness, lift up depressed vitality, restore tone to the blood vessels and prevent accidents due to fever.

When administering the alkaloids, as when the crude drugs are administered, the physician must take into account the impressionability of the patient, the resistance of the disease to the remedy, the power of absorption and of elimination and idiosyncrasies; and

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he must know just how much of the active principle he is giving at a dose. He may then reasonably expect certain physiological or therapeutic effects or both, according to quantity and frequency of administration. The most safe and efficacious manner in ordinary cases, is to administer the alkaloids in small doses at short intervals, proportioned to the acuteness and severity of the disturbance. But they must be continued, regardless of the quantity already administered; because, in order to obtain the desired therapeutic effect, we must proceed until the effect is produced. We are safe in this course, for, with small doses, the accumulation in the blood cannot become excessive; and when the effect is obtained, we stop or reduce the dose. There is no danger till the physiological effect is produced. There is a culminating point to be reached; and the small doses should be given at short intervals, in order that the effect may be reached as soon as possible. Excepting in cases of extreme urgency, and where life is in imminent peril, it is not advisable to employ the maximum doses, because of the fear of poisoning.

The foregoing are some of the many reasons which may be given to demonstrate the value of the service which has been rendered by the use of the alkaloids. The medical world is now paying greater attention to these active principles, because their superiority over Galenical preparations is self evident; and the current of therapeutic literature is constantly towards a more critical study of the medicinally active principles, rather than the crude drugs. The character of the future materia medica, so far as the botanical part is concerned, will doubtless be materially changed. More and more space will be devoted to the alkaloids and active principles; and less and less space to crude drugs.

But no one need fear that the successful use of active principles necessitates the learning of a set of new remedies; or that alkaloidal therapeutics bring into the field of medicine drugs never before heard of. On the contrary, it gives the same tools which we and our forefathers have used, greatly improved and capable of doing not only the work formerly required of them, but much else besides. But because this claim is made, it must not be supposed that the alkaloids offer everything needful for therapeutics, to the exclusion of the many other useful remedies found in other worlds than the vegetable. We have no patience with the bigotry which draws its *armamentarium medicinæ* from one quarter and excludes good remedies from other sources. It is the glory of the scientific and sensible physician that he searches he whole range of human knowledge for that assistance which helps him to relieve the suffering of mankind.

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An Ovarian Tumor Weighing 111 Pounds Removed From a Child of 15 years, Whose Weight Was 68 Pounds.

BY W. W. KEEN, M.D.,

Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College.

Miss B, of Benezette, Pa, was first seen by me at Driftwood, Pa., February 26, 1892, at the request of Dr. V. K. Corbett, of Caledonia. She was then fourteen years of age and had never menstruated. About eighteen months before I saw her, her abdomen began to enlarge. Six months afterwards Dr. Corbett was consulted for an attack of considerable pain in the left side of the abdomen. He found that she was only voiding eight ounces of urine in the twenty four hours, but under proper treatment this soon reached a quart in amount, and has remained so ever since. He never discovered any albumin in the urine. In October, 1891, she had been tapped by a gynecologist, who is said to have diagnosticated a solid and probably malignant tumor, connected most likely with the liver, omentum, and ovary, and who deemed its removal not feasible.

I found the abdomen enormously distended with fluid and advised very strongly that a small incision should be made in the abdominal wall, so that I could determine the relations of the growth with accuracy. Her father, however, was not present, and had made it a condition that nothing beyond tapping should be done. I tapped her immediately and removed considerably over three gallons of amber-colored fluid. When this was evacuated I discovered a lobulated tumor on the right side of the abdomen, under the liver and apparently attached to it. It was evidently cystic in part, there being at least two cysts perceptible. Each of these I tapped, obtaining from the upper one a light fluid and from the lower one a much darker fluid. On account of her age no vaginal examination was made. The fluids pointed strongly toward an ovarian cystoma. I again advised an exploratory incision.

April 29, 1883. The patient was finally brought to the Jefferson College Hospital. She has been tapped twice since February, 1892, the last time in February, 1893, when six and a half gallons were drawn off. She is now enormously swollen. The measurements are as follows: From the ensiform to the umbilicus, 16½ inches; from the ensiform to the pubes, 29½ inches (this measurement in myself reaches from the ensiform to the to the middle of the calf of my leg); circumference, 49 inches. The veins over the abdomen are very large. Nothing can be made out in the interior in consequence of the enormous abdominal distention. Examination of the urine shows no albumin and a very slight trace of sugar (?)

Operation. April 30, 1893. A small incision was made in the median line above the umbilicus, as the greater mass of the tumor lay there. A large trocar was thrust in and evacuated a very large quantity of characteristic opalescent ovarian fluid. The escape of this

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fluid revealed through the abdominal wall large masses lying especially under the liver and in the right iliac fossa. After this evacuation I enlarged the incision until it measured eventually about eight inches in length. I introduced my hand and found an enormous ovarian cyst, reaching up to the diaphragm and pushing everything out of its way. There were a number of moderate adhesions, chiefly to the belly wall and the omentum. The viscera were fortunately entirely free. The pedicle was only 2½ inches broad. The tumor arose in the right ovary, the left ovary being healthy but small.

The weight of the solid mass removed was twenty-seven pounds, and by actual weighing the fluid removed weighed eighty-four pounds, making a total 111 pounds. The child herself weighed but sixty-eight pounds.

After the removal of thk tumor I never saw so curious a looking abdominal cavity. It looked almost like that of an eviscerated cadaver in the dissecting room. The tumor had so pushed the liver to the right and backward, and the stomach to the left, that nearly the whole of the diaphragm was exposed, and flapped up and down with the pulsations of the heart. Down the middle of the cavity the bodies of the vertebræ were entirely exposed, showing the aorta and vena cava to their bifurcations, the intestines being a very minor consideration and pushed to each side in the hollow of the ribs and the lumbar region. When the abdominal wall was sutured the abdomen was excessively scaphoid, the anterior abdominal wall lying directy on the aorta and vertebræ The puckering of the skin, although moderately marked, was much less than I had expected.

When the operation was completed a glass drainage-tube was inserted, and she was put to bed in very fair condition, in view of the gravity of the operation. The tumor was a multilocular cyst.

May 18, 1893. The child has made an uninterrupted recovery. The drainage-tube was removed on the fifth day, when the discharge had become almost nothing, but three days later a slight rise of temperature took place, and the discharge recommenced. A small rubber drainage tube was therefore reinserted for a few days. She sat up at the end of two weeks, and will go home as soon as the slight discharge from the drainage opening ceases.

Remarks.—I have not had time to search through the literature of ovariatomy, but so far as my memory serves I have never known a larger tumor removed from a child. It weighed just one and a half times as much as the patient. Her recovery has been most satisfactory in spite of a very poor and capricious appetite. The chief lesson the case teaches is the value of an exploratory incision in every case of doubt. Had this been done, instead of a mere tapping, in October, 1891, when the tumor was much smaller, the prognosis would have been much more favorable, and she would have been spared a year and a half of needless suffering. What seemed to be a most formidable operation really proved to be an almost simple one,the adhesions and the pedicle being most favorable for the speedy recovery which has ensued.

EDITORIALS

L. T. Riesmeyer, M.D., Editor.

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

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Wound-Infection in Spite of Asepsis.

Theoretically it is, at the present time, inconceivable that a wound-infection should take place when an operation is done aseptically. While the vast majority of well-informed surgeons concede that when an operation is done aseptically, ordinarily no inflammatory reaction can take place, there are still some that are skeptical in this respect. With regard to this question it seems that there are three categories of men. First, those that always operate under almost ideal surroundings, with assistants trained in all the details of asepsis. Among these the most successful readily admit that in spite of all precautions taken, it may occur that a wound will not heal by first intention. Such an occurance they will attribute to the fact that some mistake has occurred in the preparation for the operation or during the same, which they admid, may occur to any one. We have often heard Bergmann, for instance, express himself in this sense. In the second category we may place those that have excellent results under most unfavorable surroundings. Surgeons with apparently perfect technique, skillful operators, but with either an imperfect understanding of what complete asepsis means or blinded by their favorable results. The only thing that distinguishes them from the operators of fifteen or twenty years ago is that they use aseptic or antiseptic dressings, and place their instruments in antiseptic solutions.

The third category, we surmise, is made up of but few. It consists of men that have had bacteriological

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training, yet having met with sepsis in the very cases where they paid the most scrupulous attention to details in asepsis, jump at the conclusion that in practice they will get along just as well without the extreme precautions, which, from their laboratory instruction, it appeared necessary to take. To illustrate the fallacy of this argumentation we will relate the case of a physician, who, after attending a full course on bacteriology in Fraenkel's Laboratory, Berlin, returned and attended a case of confinement. The most careful aseptic precautions were taken, yet the patient died of puerperal fever. How did the infection take place? Excluding the possibility that, in spite of all precautions, streptococci might have been carried to the lacerated tissues—considering the location of the parts concerned—the patient had had puerperal fever in a previous confinement, leaving a parametritic exudate. It is, consequently, not improbable that dormant germs within the exudate became active in consequence of the process of parturition and an infection of the wound surface within the uterus thereby taking place from the parametritic exudate.

Analogous experiences have been made time and again; for instance, in the development of a tubercular synovitis in consequence of a contusion of a joint—here latent tuberculosis becoming an active process. We may also cite the frequent relapses of erysipelas in some patients, etc.

An illustration of what is not asepsis we find in the New York *Medical Journal*:

The scene occurred in one of the most prominent of our New York hospitals, the time of action was within the last five years, and the *dramatis personæ* were a patient who was to have a portion of his cerebral cortex removed, one of the best of New York surgeons, a prominent neurologist, assistants, visitors, and students. The surgeon had deftly and carefully removed the bone and made a flap in the meninges, and the neurologist was about to decide the location of the cortical center. Turning on the current of his battery, he applied the electrodes to his tongue to determine the strength of the current, and was about to transfer the electrodes to the cortex when the surgeon, who had watched this method of current-testing with evident concern, arrested the neurologist's hand, saying at the same time that the electrodes must be disinfected again after contact with the mouth. The disinfection of the instrument being completed, the neurologist confirmed the location of the center, and the surgeon prepared to complete his work. As he took his stool to resume the use of the knife he found that the light was insufficient; rising, he caught hold of the gas-fixture placed above the operating table, pulled it down over the field of work, placed his stool in a little more convenient position, and, forgetting to disinfect his hands, proceeded with the operation. The mote caused by the neurologist's *gaucherie* had been removed, but the beam of the surgeon's forgetfulness resulted in the death of the patient in consequence of suppurative meningitis.

Chemiotaxis.

Some very interesting experiments illustrating the process of chemiotaxis we find in "Sternberg's Manual of Bacteriology."

The term chemiotaxis designates the property which certain living cells exhibit with reference to non-living organic material, and by virtue of which they approach or recede from certain substances. Chemiotaxis is said to be positive when the living cell approaches, and negative when it recedes from, a chemical substance. As examples of this may be mentioned the approach of bacteria to nutrient material or to the surface of a liquid when they find the oxygen required for their vital activities; and of leucocytes to certain substances when they are introduced beneath the skin of warm- or cold-blooded animals. According to Grabitchewski, the following substances have a negative chemiotaxis for leucocytes: Sodium chloride in ten per cent solution, quinine, lactic acid, glycerin, chloroform, etc. Positive chemiotaxis is excited by sterilized and non-sterilized cultures of various bacteria. This is shown by the fact that when a small capillary tube, closed at one end, which contains the substance to be tested, is introduced beneath the skin of an animal, the leucocytes are repelled from the tube by certain substances, while those which incite positive chemiotaxis cause them to enter the tube in great numbers. It seems from the experiments of Buchner that the positive chemiotaxis induced by sterilized cultures of bacteria introduced beneath the skin of an animal, is due to the proteid contents of the cells rather than to their chemical metabolic products. But that their chemical products may at times produce a positive chemiotaxis independently of the bacteria is shown by the experiments of Grabitchewski with filtered cultures of bacillus pyocyanus.

When, according to Bouchard and others, a tube containing a culture of bacillus pyocyamus is introduced beneath the skin of a rabbit it is found, at the end of a few hours, to contain a great number of leucocytes. But if immediately after its introduction ten cubic centimeters of a sterilized culture of the same bacillus are injected into the circulation through a vein, very few leucocytes enter the tube introduced beneath the skin—that is, the chemiotaxis of the leucocytes for the bacilli contained in the tube has been neutralized by injecting a considerable quantity of the soluble products of the same bacillus into the circulation.

Buchard, having shown that the bacterial cells contain a proteid substance which attracts the leucooytes, experimented with various other proteids and found that glutin, casein from wheat, and legumin from peas had a similar effect. Starch has no effect, but a mass of flour, made from wheat or from peas, introduced beneath the skin of a rabbit or a guinea-pig, with antiseptic precautions, in the course of a day or two is enveloped and penetrated by immense numbers of leucocytes. If, instead of introducing these substances which induce positive chimiotaxis beneath the skin, they are injected into the circulation, Buchner has shown that a great increase in the number of leucocytes occur.

The New National Quarantine Law.

A bill entitled An Act Granting Additional Quarantine Powers and Imposing Additional Duties upon the Marine Hospital Service, finally passed both Houses,and received the sanction of the President.

Section one of this bill makes it unlawful for any ship to enter any port of the United States, except in accordance with the provisions of this act.

Section two requires every vessel clearing for any port in the United States to obtain from the Consular Service of the United States, at port of departure, a bill of health setting forth the sanitary history and conditions of such vessel, and that it has complied with the rules and regulations prescribed for securing the best sanitary condition of said vessel, its cargo, passengers and crew. The penalty imposed for non-compliance of this provision is not more than $5,000.

Section three directs the Supervising Surgeon-General of the Marine Hospital Service to examine the quarantine regulations of all State and Municipal boards of health to co-operate with them in enforcing such regulations. Where such regulations do not exist, or where additional rules are necessary to prevent the introduction of infectious diseases into the United States, or from one State into another, the Secretary of the Treasury is empowered to draft such regulations, which are to operate uniformly, and in no manner to discriminate against any port or place.

Section four confers upon the Surgeon-General of the Marine Hospital Service, under the direction of the Secretary of the Treasury, the performance of all duties in respect to quarantine regulations, to obtain information regarding the spread of infectious diseases, and to publish and transmit to collectors of customs, health officers, etc., weekly abstracts of the consular sanitary reports.

Section five provides that all ships bound for the United States shall take such steps as will place the crew and cargo in the best sanitary condition possible before a bill of health shall be granted them; and, further, that in case of an outbreak of cholera or other contagious or infectious diseases, such ship shall be detained at quarantine for disinfection and isolation.

Section six provides that in case an infected vessel enters a port not provided with the proper facilities for treatment of the same, said vessel must seek the near est national quarantine station where the necessary accommodations and appliances are provided for disinfection and treatment.

Section seven gives the President power to prohibit the introduction of persons and cargo coming from an infected port whenever there is serious danger of the introduction of cholera or other infectious disease into the United States.

Section eight authorizes the payment of a reasonable sum to the State authorities for all buildings and apparatus surrendered to the United States for quarantine purposes.

Section nine repeals the old National Board of Health law, and directs all property belonging to this board to be placed under the control of the Secretary of the Treasury.

The Pathology of Chronic Urethritis.

In a recent number of the *Internationales Centralblatt f. die Physiologie und Pathologie der Harn und Sexual Organe* (*Internat. Jour. of Surgery*), Dr. Ernest Finger, the distinguished genito-urinary surgeon of Vienna, presents a careful study of the pathology of chronic posterior urethritis and blenorrhagic prostatitis, which is based upon post-mortem examinations of the urethra in twelve cases suffering from the disease. As is well known, chronic urethritis, especially the posterior form, is one of the most obstinate affections which the physician is called upon to treat, and there are not a few who regard these cases as well nigh incurable. Inasmuch as clearer knowledge of the somewhat obscure pathology of this form of urethral trouble must conduce to a more rational and scientific method of treatment, it is instructive to briefly review the salient points of Dr. Finger's investigations. According to him, chronic urethritis is a circumscribed process occurring in the subepithelial connective tissue and manifesting itself as a chronic hyperplasia of the connective tissue. Changes in the epithelium and glands are to be regarded as partly complicating and partly as consecutive lesions. The foci in chronic urethritis are especially localized in the pendulous, bulbous and prostatic urethra.

The membranous portion possesses a comparative immunity to the chronic process. In some cases of chronic infiammation, whether anterior or posterior, the lesions are situated superficially in the subepithelial connective tissue of the mucosa. In another set of cases the process extends by continuity to the submucus tissue; in the anterior nrethra to the peri-urethral and cavernous tissue; in the posterior to the prostate. Complicating localized affections thus arise; in the pars anterior, a chronic peri-urethritis and cavernitis, in the pars posterior, a chronic prostatis. On the ground of these pathological observations Finger considers himself justified in establishing the following anatomical forms of chronic urethritis: 1. Urethritis anterior chronica—*a*, urethritis anterior chronica superficialis, mucosa; *b*, urethritis anterior chronica profunda. 2. Urethritis chronica posterior—*a*,urethritis posterior chronica superficialis, mucosa; *b*, urethritis chronica posterior profunda, *i. e.*, complicated by chronic prostatitis. Mixed forms in which some of the lesions are superficial and others submucous occur quite frequently. The author believes that by the employment of the urethrometer and by examination of the urethral and prostatic secretions, in connection with a careful study of the history and symptoms, it is possible to accurately classify each case, and refer it to one or another of these forms. For many years he had been able to distinguish between the above mentioned forms by clin-

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ical methods of examination, and he is now satisfied that his anatomical investigations have positively demonstrated the existence of these varieties of chronic urethral inflammation.

The Treatment of Brain Injuries.

In a suggestive article published in the *Deutsche Medicinische Wochenschrift* (*Internat. Jour. of Surg.*), Dr. Adamkiewicz discusses the question whether brain injuries are to be treated in the same manner as wounds in other parts of the body. Physiological investigations have shown that the brain is extremely sensitive to chemical irritants, and for this reason the author has set himself the task of determining, by experiments on animals, the action of antiseptics upon the cerebral tissues. To establish the same conditions as in the case of cerebral traumatisms where the antiseptic is brought in direct contact with the wounded tissues, he injected the antiseptic into the brains of the animals experimented upon. For the purpose of securing uniformity of results the antiseptics selected were injected in amounts of one gramme. It was found that carbolic acid in solution of the strength of 1 in 200 produced irritant, but not lethal effects, while in somewhat stronger solutions it speedily caused death. Corrosive sublimate always inflicted severe injury upon the brain tissue, even in as week solution as 1 in 10,000; and it is therefore condemned as an antiseptic in brain surgery. Boric acid in three per cent solution was found to be absolutely devoid of injurious effects. The general deduction, drawn by Adamkiewicz from his experiments on animals, is that the use of both carbolic acid and bichloride of mercury should be avoided in cases of wounds of the brain, while boracic acid can be employed without danger. It would seem, therefore, that in the antiseptic management of this class of injuries, special precautions are required, the neglect of which may be productive of grave, and even fatal consequences.

A New Use for the Spleen.—Drs. Pizzoni and Pattani (*Cincinnati Lancet-Clinic*) have through experimentation upon animals, discovered that the spleen is a necessary factor in the production of immunity from infectious diseases. Guinea-pigs, from which the spleens were removed, were found to beeome permanently incapable of being rendered immune to the virus of tetanus. This discovery may have a marked influence in clearing up some of the mooted questions relating to immunity. It may be possible that this organ becomes the store-house of the various antitoxines produced during the course of the infectious diseases. The fact that this organ enlarges during the course of this class of diseases might serve as a clew from which valuable facts can be obtained. Our ignorance concerning the functions of this ductless gland makes the organ a promising field for study.

ABSTRACTS

Treatment of Pulmonary Phthisis.—Dr. M. Boulay (*Gazette des Hopitaux*) passes in review all the substances composing the pharmaceutical arsenal which have been successively employed in this disease. Under curative treatment, he makes a divsion of the remedies employed into: inefficacious or dangerous medication and medication possessed of some value. The first division comprises substances known as parasiticides, which are supposed to possess a specific action. The recommendation to allow afflicted patients to respire the air surcharged with ammonial vapors, is faulty. Later, the recommendation to allow patients to inhale putrescent vapors, based on the experiments of Cantani, who maintained that the bacterium termo was inimical to the bacillus tuberculosis, was likewise shown to be incorrect. The inhalation of hot air, while theoretically reasonable, is practically useless. Inhalation of compressed or rarified air is not curative, and incites hemoptysis. The relief obtained in the asthmatic attacks of phthisical patients is due to the breaking of the pleural adhesions. Inhalations of oxygen and ozonized air are of no value, and the latter is dangerous, owing to its destructive action on the hemoglobin. Similar disposition is made of inhalations of chlorine and chloroform. The employment of sulphuric and fiuoric acids was suggested by the fact that laborers in the factories where these acids are used, never have tuberculosis. Later, sulphuretted hydrogen was used by inhalatiou, but chiefly as gaseous lavements. The theory of action was supposed to be this: that in the elimination of the gas by the lungs, it acted as a parasiticide. At the time of using this gas, many attributed its effects to carbonic acid; in fact, the results obtained were similar to those when sulphuretted hydrogen was employed. Later, it was suggested to inhale the vapor of picric acid solution in a state of ebullition; but this, as well as the inhalation of osmic acid was discontinued in a short time. Boric acid, in consequence of its relative inoccuousness was used in large doses, but its ingestion was without influence on the pulmonary lesions, and only aggravated any dyspeptic trouble which might be present. Similar results attended its use by intra pulmonary injections and inhalations. Vapors of iodine, tincture of iodine, and iodide of potassium have been successively employed. The latter drug liquefies the secretions and promotes the expulsion of the bacilli, but it is difficult to manage, and often provokes formidable hemoptysis. Iodoform is of some value in diminishing the fever, but it disturbs digestion, and has a feeble action on tubercle bacilli, as culture experiments have shown. Among the metallic substances, may be mentioned: iodide of iron, acetate of aluminum, chloride of gold, and nitiate of silver. Mercury, by ingestion, inhalation, friction, hypodermatic and intra pulmonary injections is without obvious results. Aniline oil, and the aniline colors, are virulent in their action. The following have likewise been used without result: naphthol, phenic acid, Eucalyptol, camphor, menthol, thymol, and aristol. The most celebrated treatment is that of Koch, by

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means of lymph of indefinite constitution and known as tuberculine. Koch supposed that tuberculine, injected under the skin, would produce a necrosis of the tissues invaded by the bacilli, and create in their environment a refractory barrier to their further development; and when the mortified tissues are cast off, cure is obtained. Experience has disproved this hypothesis. Tuberculine is a dangerous substance, and often produces a tableau of symptoms analogous to acute miliary tuberculosis. All attempts to eliminate the toxic ingredients of tuberculine, whether by alcohol (Koch), dialysis (Hunter), by benzine and chloroform (Klebs), have been in vain. The method proposed in 1891, by Liebreich, is founded on the microbicidal power of serum, and the property possessed by cantharidate of potash, of provoking a serous transudation from the cappillaries of the lungs and kidneys. This author injected cantharidate of potash in daily doses of $^1/_{10}$ to $^2/_{10}$ of a milligram. In man it provokes, even in such small doses, cystitis and hematuria, and is, therefore, justly abandoned. Since many years, researches have been instituted for the purpose of determining whether immunity can be conferred on phthisical individuals by various methods of vaccination. The idea of inhibiting tubercular processes by other diseases, is very old. It has been remarked that there is a certain antagonism between tuberculosis and other diseases. That has been observed with reference to hysteria, alcoholism, rheumatism, and saturnism. It has further been observed that typhoid fever, variola, and malaria, have restrained the evolution of tuberculosis. Many of these observations are erroneous. Many observations, however, seem to demonstrate beyond question that erysipelas will stay or favorably influence pulmonary tuberculosis, and it has been proposed to inoculate phthisical individuals with the streptococci of erysipelas. Experimenters have attempted to emulate Pasteurian vaccination, i. e., to inoculate phthisical patients with cultures of tubercle bacilli, or progressive virulence. Experiments with this object in view, conducted by MM. Graucher and H. Martin in 1890, have been very encouraging; but as they experimented with aviary tuberculosis, which is not identical with human tuberculosis, the results of their experiments are questionable. MM. Hericourt and Richet first conceived the idea of treating tuberculosis of rabbits by inoculating them with blood of serum of some animal refractory to tuberculosis, such as the dog. MM. Picq. and Bertin, later on, used the blood of the goat. The dog and goat do not possess complete immunity against tuberculosis. Perhaps by employing the blood serum of an animal absolutely refractory to tuberculosie, man may be rendered immune. The treatment of Brown-Sequard, by means of subcutaneous injections of the aqueous extracts of testicles, has been applied in phthisis, not with the hope of cure, but for the purpose of controlling the debilitation. Resection of the apices of the lung for the cure of phthisis, is a hazardous operation Intra pulmonary injections of chloride of zinc may be of value in circumscribed tuberculosis; while alcohol, used in the same manner, may cause a proliferation of the connective tissue elements, and thus limit the tubercular process. The many methods of treatment just passed in review, have had their hour of celebrity, and surprising to say, their hour of success.

Medication Possessed of Some Value — In this category, the agents recommended have their indications and contra indications. Arsenic has been looked upon as an excitant of nutrition, and as a parasiticide. It is poorly tolerated by patients with gastric and intestinal affections, in which cases it may be used hypodermically. The doses must be gradually increased, and long continued, in order to secure a mithridatic effect in the tubercular process. The efficacy of certain mineral waters is owing to arsenic as an ingredient. Other waters owe their efficacy to the presence of sodium chloride and phosphate of lime, both of which substances are expelled in large quantities in the urine and sputa of consumptives. Tannin has been used with remarkable results by MM. Raymond and Arthand. They found that tuberculosis in rabbits was inhibited by this remedy. In man, tannin in daily doses of from two to five grains, will produce an amelioration of the general symptoms and arrest the evolution the malady. Under its influence, the circumscribed tubercular process is brought to cicatrization. These good effects have been confirmed by others. Its mode of action is problematic. Creasote is the most universally employed agent in phthisis. All the opinions relative to the favorable action of creosote are mere theories. It stimulates the appetite and arrests the bronchial secretions. It is certainly not a specific. Many cures reported from its use have been temporary. Large doses of creosote are not well borne; in fact, large doses are unnecessary, the same results being attained by small doses. M. Tapret has employed creosote with success by inhalation, in a cabinet under increased pressure. The effects produced by intra tracheal and pulmonary injections of creosote ore negative. Creosote may likewise be employed by hypodermic injections, inunctions in suppositories, and finally by lavements. Guiacol has been employed as a substitute for creosote with results similar to that of the latter.—*Occid. Med. Times.*

Diuretin in the Treatment of Scarlatinal Nephritis.—Demme (*Journal de Medecine de Paris,*) states that diuretin is contraindicated in infants under one year of age, with whom its administration is often followed by irritation of the gastro intestinal mucous membrane. To older children, two to five years, he gives 6 to 22 grains daily, increasing this to 45 grains in children from six to ten years old. He has employed this drug in 11 cases: in 4 of which there was anasarca; in 2, mitral insufficiency, with insufficient diuresis, despite the restoration of compensation by digitalis; in 2, coronic peritonitis with ascites; and in 2, pleurisy with effusion. Diuretin he finds to be an efficient diuretic,

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acting directly upon the epithelium of the kidney. It is impossible to pronounce upon its influence over the circulation, but it seems to be of little moment. In scarlatinal nephritis it is very energetic, the ascites disappearing more rapidly than under the action of any other diuretic. It is important, however, to describe it only after the end of the first stage of the inflammation. The anasarca and ascites following upon mitral lesions should be first treated by digitalis until compensation has been secured, and then submitted to diuretin. Under these conditions all dropsy rapidly disappears.

Mineral Waters.—The following is an abstract of a paper on "Artificial and Natural Mineral Waters," read by Prof. G. Liebreich at the Balneological Congress recently held in Berlin (*British Medical Journal*). He began by asking: Is chemistry sufficiently advanced to produce artificial mineral water equal in all respects to the natural water? The answer cannot be in the affirmative. Some substances, such as alizarine, indigo, urea, etc., can be produced synthetically, the artificial product being in every respect identical with the natural one. But in the case of mixtures such as mineral waters are, synthesis is a much more difficult matter. The analysis of each of the first mentioned substances gives exactly 100 per cent., whilst in the case of artificial mineral waters the analyses, even of the most renowned analysts, fall short of 100 per cent, thus leaving a remainder the nature of which is absolutely unknown.

Many mineral waters on evaporation leave an organic residuum which goes by the name of glairine. It cannot be affirmed with certainty that this residuum is therapeutically efficacious, but just as little can it be denied, and certainly the residuum is not contained in the analyses of the artificial mineral waters. Further in mineral waters, carbonic acid gas occurs both free and in chemical combination. In 1882 it was discovered that carbonic acid gas forms a hydrate, that is to say, that there exist several kinds of carbonic acid gas. The presence of a carbonic gas hydrate had long been concluded from the existence of another combination that is a derivative of it namely, carbonic acid ethyl.

There is a further reason for thinking that minimal quantities of substances in mineral waters may be of importance. The salt mixture forms a whole from which no part can be taken away without disturbing the equilibrium. This shows the fallacy of the old-fashioned notion that springs, the chief ingredients of which are the same, have the same therapeutic effect even though differing in some minor ingredients. There is no analysis so exact or sensitive as our senses—taste and smell. A perfume of musk in the air is perceived by the smell even though it cannot be demonstrated by chemical analysis. Even the best manufactured artificial waters differ from the natural ones in taste and value. This difference is not easy to explain. It is sometimes found, however, that the two mineral waters, otherwise identical, differ as regards electrical conductibility.

As to the so called "indifferent" springs it is a mistake to speak of them as of minor value. It must be remembered that they too contain mineral ingredients, if only in minimal quantities, which counteract the harmful properties of perfectly pure distilled water. Even hydropathy is a mineral water treatment, for if the water used were without traces of mineral substances it would be poisonous. This has been sufficiently proved elsewhere.

The Coagulability of the Blood in Parturition a Factor in the Occurrence of Post-Partum Hemorrhage.—That of all the dangers incident to parturition, post-partum hemorrhage is the most unexpected, sudden and overwhelming, needs scarcely more than mention by me, says Dr. Ridgway Barker (*New England Med. Monthly*). Books, pamphlets and papers innumerable are continually calling our attention to the most radical means of treatment, and yet the death records still find their pages blotted with the names of women who have lost their lives by the failure even of improved methods and measures.

The turbulent stream would seem to have been sounded, and the bars, sunken rocks and shallows accurately located, but for all that shipwreck has occurred. And why?

The ship's course was carefully marked out on the chart; the likelihood of storms was carefully considered, and yet the result was disastrous.

What was it that caused the good ship to go on the rock? Nothing less than the swift, strong, resistless, ungovernable current which we failed to appreciate as we approached the harbor. Had we properly estimated this factor, the results of the voyage would have been far different; and it is to this swift current, metaphorically alluded to, that I wish to call your attention, namely, the blood. In the prevention of the occurrence of post-partum hemorrhage two factors are at work; firstly, tonic uterine contractions and retractions; and, secondly, coagulation of the blood at the orifices of the veins and arteries beneath the decidua serotina.

That a definite relation must exist between these two forces to secure a perfect result is very evident. For if one fails to respond to the normal stimulus, then dangerous hemorrhages will inevitably result.

Fully appreciating the importance of firm coagulation of the blood after delivery as a preventive against hemorrhage, and recognizing the inestimable value of a trusty danger signal that may be seen afar off, when such a condition does not exist, I have sought for one that might be worthy of credence, and believe I have found it in the blood which escapes from the parturient canel during the second or even earlier stage of labor. Should this fail to coagulate promptly on exposure to the air, then we may take it as a warning that the patient runs no slight risk of post partum hemorrhage, and every precaution should be taken to guard against a

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surprise. It is not to be supposed that every female in labor, whose blood does not coagulate with the normal rapidity, is doomed to suffer an attack of post-partum hemorrhage; that would be too sweeping an assertion; but what the writer wishes to declare is, that the danger of post-partum hemorrhage is directly proportionate to the coagulability of the blood and the persistency of uterine muscular contractions.

Further, that the former condition is made manifest during the early stages of labor and may, therefore, be accepted as a danger signal, and precautions taken accordingly. Without firm plugs in the arterial branches and venous sinus we cannot feel satisfied that our patient is free from the risks of post partum hemorrhage. No matter how great be the coagulative power of the blood, however, it cannot prevent hemorrhage if the ordinary precautions are not taken.

To deliver the fetus with undue haste, to resort to forcible dilatation of the cervical canal, or to make violent attempts at detachment and expulsion of the placenta, to disregard, in a word, all the fundamental principles underlying the conduct of labor, is to invite hemorrhage in any case. That this easily acquired knowledge of the coagulability of the blood during confinement early in its course can be put to practical advantage needs no confirmation by the writer. It places us on our guard. It warns us to be conservative of the vital forces of the female, and especially so of the blood supply,

It moreover, affords us an opportunity to make preparations for the impending danger, and if the obstetrician cannot avert it, at least he can reduce its baneful effects to the minimum.

It is not necessery that all the blood escaping from the birth canal should show this decided tendency to coagulate, for a part of the fluid only may do so, the remainder being so freely diluted with the liquor amnii that such a change is not possible. One clot will indicate its character, and upon this we may place considerable reliance. Of course, though the blood clot firmly, one is not justified in folding his hands when attending a case and saying "there is no danger from post-partum hemorrhage because you see the blood clot firmly." Not at all! It simply means the female is less likely to suffer in this way than her sister whose blood is so poor and watery that it lacks coagulative power.

The white light may shine out brightly from the switch box, to borrow a phrase from the railroader, notwithstanding the switch is misplaced, if an accident has occurred which renders it inoperative. So with the blood; it may give evidence of containing all its chemical constituents in proper relation and proportion, yet something else may be wrong which prevents its powers being availing. Having seen from the above the close relationship which exists between deteriorated blood and post-partum hemorrhage, the latter in point of fact being the sequence of the former, it remains for us to take measures early in the period of gestation to counteract, by an abundance of fresh air, sunlight and judicious exercise, this degenerative tendency, and so overcome it that our patients, when they are brought to their confinement bed, may be spared the dangers of post-partum hemorrhage.

Nor must the quality and quantity of food taken during this trying period be overlooked, for these matters are no whit less important than those before mentioned. Rich blood ensures healthy nerves, which are ever ready to act upon healthy muscles, and these in turn upon the bloodvessels.

When we have attained this condition, and associate it with judicious management, post partum hemorrhage will become a thing of the past.

A New and Rapid Method of Removing the Uterus.—At a recent meeting of the Kansas City Academy of Medicine, Dr. Emory Lanphear (*Med. Rec.*), presented a number of fibroid tumors, sarcomata, etc., removed by a new method of hysterectomy. The abdomen and vagina having been carefully sterilized, he makes an incision in the median line terminating as close to the pubes as possible, draws the uterus with one tube and ovary to one side, and applies a clamp to the broad ligament; a strong ligature is passed a half inch away from this, including the blood vessels, and tied; the intervening tissue is then cut with the scissors. Upon the opposite side the same procedure is carried out. When done, the uterus (hitherto held down by the broad ligament) can be lifted up into the wound and separation from bladder and rectum easily accomplished; these incisions, before and behind, are carried into the vagina, when a Kelly's or Polk's clamp is introduced through the vagina as close as possible to the uterus, its points reaching the ligature already tied in the broad ligament. As soon as properly applied it is closed and its fellow clamp inserted upon the other side, when the uterus is quickly cut away with curved scissors. The pelvis is irrigated and the abdomen wound closed and drainage made through the vagina, as in cases of vaginal hysterectomy. The clamps are removed in forty-eight hours. The operation can be done in twenty-five to thirty minutes, baing much easier than even vaginal hysterectomy with clamps. By the rapidity allowed and by the good drainage secured, Dr. Lanphear thinks this operation can be done almost as safely as an ovariotomy—certainly as safely as a vaginal hysterectomy; and it is much preferable to any method which leaves a pedicle or stump behind. He finds it is not necessary to unite the bladder to the rectum, as union takes place just as quickly without sutures as with them.

Pathology of Paralysis Agitans.—In the *Zeitscrift f. Heilkunde* von Ketscher has an important paper dealing with this much disputed subject. An abstract of it is given in a recent number of the *Neurologisches Centralblatt.* The cases of paralysis agitans with reference to their pathological anatomy, are divisible into two classes, those in which the examination

has furnished negative results, and those in which various changes have been found in the nervous system, such as hyperplasia of the connective tissue and neuroglia of the spinal cord, alterations in the nervous tissue itself and vascular changes. Similar changes have been described as occurring in the medulla and pons. Three cases of undoubted paralysis agitans have been investigated by von Ketscher. The nervous system, central and peripheral, was examined, and in all three cases changes were found in both regions. The nervous structures showed atrophy, the ganglion cells of the brain were deeply pigmented and altered in form, the nerve fibres, both in the peripheral nerves and in the spinal cord, were degenerated, and had, in some instances, disappeared, whilst the muscular fibres were also atrophied or degenerated. The neuroglia was thickened, especially around the vessels and mostly in the posterior and lateral columns. The vessels also were altered, their walls thickened, and there were miliary aneurisms and small hemorrhages present. Similar changes, but slighter in degree, were found as senile changes in patients not the subjects of paralysis agitans. Von Ketscher concludes, with Borgherini and others, that paralysis agitans is only the expression of an extreme and premature sensibility of the nervous system, and he is of the opinion that the primary changes are in the vessels, those in the nervous structures being secondary..

The Motor Disturbances of the Heart of Nervous Origin.—Dr. George W. Jacoby (*Med. Week.*) read a pager on this subject. He stated that in a large number (probably in more than one-half) of the persons who consult us on account of some motor disorder of the heart, no anatomical lesion is clinically discoverable, and no mechanical cause can be found. In such cases it is reasonable to seek for the cause of the altered function in some disorder of the complicated nervous apparatus of the heart. The subject may be conveniently divided into intermittent, irregular, abnormally slow (bradycardia) and abnormally frequent (tachycardia) heart's action.

Intermittency may be true or false; in the latter form the pulse fails, but the heart is regular, while in the former the heart beat is actually dropped. In irregularity of the heart's action the number of pulsations varies from minute to minute, or the pulsations vary in height and tension. These forms of arhythmia may be persistent or only temporary; when persistent. Dr. Jacoby said they are probably due to some organic disease of the heart, whether such can be detected or not; when they are temporary, they are either dependent upon defective blood mixture or are purely neurotic. Toxic influences associated with sexual excesses, and with the excessive use of tea, coffee, tobacco and alcohol he has found to be potent in the production of arhythmias. Intermittency may be due to even the moderate use of alcohol.

Slow pulse, or bradycardia is a term applied in cases where the pulse falls below 60 per minute, or according to other writers, below 40. Slow pulse should be regarded as a symptom only and may be due to a variety of causes. If we make use of the term bradycardia at all, we should limit it to such cases in which the infrequency of the pulse is due to a disorder of innervation. A slight reduction in frequency of the pulse is very common in disturbances of the digestive tract.

In paroxysmal tachycardia the attack is always sudden in its onset and usually unexpected. The pulse is increased from normal to 180, 240 or even to 300 per minute, according to some observers. There is no irregularity of rhythm nor intermittance. The heart beats in a strong and energetic manner, and in direct contrast to its action is the extreme diminution of arterial tension. The cessation of the attack is as sudden as its onset. The paroxysms vary in duration from a few minutes to several hours, and occasionally last even for days. The intervals between the attacks are irregular. During an attack the excretion of urine is generally diminished; it may be followed by the passage of a large quantity of clear, limpid urine. The etiology of these cases is ob-cure. Psychic influences, fright, errors of diet, bodily exertion have all been assigned as causes. It is an affection of adult life, this we can say positively, and the best established causes are bodily and cerebral overwork

In concluding his paper, Dr. Jacoby referred to the pathology of these cases, and gave a brief review of the various theories put forth regarding the nervous mechanism of the heart. The assumption that we are dealing with a bulbar neurosis in these cases appeared to him to be the most probable one.

The Influence of Chloroform Upon the Course of Normal Labor, as Shown by the Tachadynamometer.—Donhoff (*Archiv. fur Gynakologie,*) administered chloroform in various degrees to five cases of normal labor, and noticed its influence upon the expulsive force of the uterus and abdominal muscles, as shown by a carefully constructed physiological apparatus. The conclusions reached are in substance the following:

1. The administration of chloroform, even in diminutive doses, exercises a retarding influence upon the progress of labor. The muscular pressure sinks to one half of the amount of that present before the administration of the anesthetic. In eight observations the average figures were 1837.

2. The expulsive force of the uterine contractions steadily diminishes during the exhibition of chloroform.

3. The labor pains, besides being weaker, are also more irregular during a slight anesthesig. During deep anesthesia the intervals between the pains are longer and all the pains are diminished in strength.

4. The pains increase immediately after discontinuing the anesthetic. The expulsive force of the contractions after stopping the chloroform, compared with the

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force just before its administration, is, as expressed in figures, 2 3.

5. The labor pains generally continue diminished in power for some time after discontinuing the chloroform. In one case they had resumed their normal intensity in ten minutes, while in two other cases two hours had expired.

6. If the action of the abdominal muscles is only slight, this action is checked entirely by a superficial anesthesia, but soon reappears after the stopping of the chloroform.

7. The action of the abdominal muscles continues, but in diminished force, during superficial anesthesia, if before the exhibition of the chloroform it was vigorous in character.

8. Deep anesthesia abolishes entirely the action of the voluntary muscles.

9. The intervals between the pains become longer immediately after chloroform is administered, and the labor pains, besides being less intense, decrease in numbers about twenty-five per cent.

These carefully conducted experiments show that chloroform, no matter in what degree it is administered, exercises a retarding influence upon the progress of labor. The expulsive forces are lessened and there is no corresponding diminution of the resistance.

Albuminuria of Pregnancy.—Prof. Jaccoud (*Muuch Med. Wochenschr.*,) has used the milk diet as a remedy for and as a profhylactic against autointoxication in the albuminuria of pregnancy ever since 1872. From year to year the superiority of this method has be impressed upon him, and only in cases of threatening danger does he have recourse to purgation or bleeding. As albuminuria itself is not dangerous, but merely an indication of threatening autointoxication, as soon as it is observed he places the patient upon an exclusive milk diet, which is continued until after confinement. The whole twenty-four hours' quantity of urine should be examined at least once a week in order to obtain any certainty with regard to the condition of the kidneys. Since 1880 he also employs inhalations of oxygen in slight cases, giving thirty quarts per diem; in graver ones from twice to three times that quantity. Every pregnant woman should carefully protect herself, from the sixth month on especially, from taking cold, as then the kidneys are severely taxed. Finally, he advises every woman to observe a mixed milk diet from the very beginning of pregnancy, in order to prevent albuminuria from setting in—one to one and a half quarts in twenty-four hours during the first six months, and two quarts daily until labor, when it may be gradually reduced during the six weeks after confinement. Out of five cases in which this method was followed three were suffering from heart disease. They presented no albumen in their urine, and their labors were perfectly normal.

CORRESPONDENCE

Rubeola.

Editor MEDICAL REVIEW.—Presuming on your indulgence, I will relate my own experience with one of those comparatively common, yet often (to the general practitioner) very interesting exanthematous diseases which frequently appeal to our nicest powers of discrimination. On the 7th ult I was called to see a bright youth of nine years presenting the following symptoms, viz: Pulse rapid, skin hot and dry, tongue coated in center, head-ache, cough, reddish condition of the mucous membrane of eyes, nose, throat, larynx etc, lachrymation and congested conjunctivæ. History developed the fact that about one year previous the patient had had a well marked and typical case of scarlet fever, at my second visit, on the following morning I found the characteristic eruption and diagnosed my case measles. The cose ran a typical course without incident, except that comparatively frequent sequela, acute albuminuria, which under the usual treatment disappeared after a few days and the patient was discharged. Now comes the interesting feature in this case. About ten days from the disappearance of the eruption my patient with his mother again appeared at my office, the little fellow presenting almost the same set of symptoms, related in the first attack, minus the injected conjunctivæ. On the following morning I was again called and found him peppered, all over the neck, shoulders, arms trunk and thigh's with an exanthematous eruption which at first glance seemed identical with that of the two weeks previous. Now, Mr. Editor, this boy had had both scarlatina and measles, and although I have met so many persons who tell me they have had measles twice that my faith in immunity has often been badly shaken, still while I confess if this boy had never had measles, I would have spent but a short time in considering my diagnosis, but to my mind, this boy had had measles enough, and, I was unwilling to subscribe to that diagnosis again, hence I have diagnosed, the first attack rubeola and the second attack rubella. I will not now presume to note the more salient point of contradistinction. I found Edwards, in Keatings cyclopedia of diseases of children, very helpful to me. Now the question I would like to see provoked, is this: Can the same individual have measles more than once? or to modify the proposition, is it not more frequently an error in diagnosis than a fact that persons have had measles more than once. P. L. K., M.D.

[The occurrence of measles in the same subject more than once is very rare. In all probability the occurrence of the second eruption was due to an attack of German measles, as our correspondent has stated. He has omitted to state whether any pharyngitis and swelling of cervical glands was present.—Ed.]

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MEDICAL SOCIETIES

American Medical Association.—We are indebted to the *Medical Record* for the following interesting report of the forty-fourth annual meeting, of this association which was held in Milwaukee, Wis, June 6, 7, 8, and 9, 1893.

FIRST DAY, TUESDAY, JUNE 6.

The general session was called to order by the Chairman of the Committee of Arrangements, Dr. Wingate, at 11 A. M., in the Academy of Music.

Prayer was offered by Rev. Henry T. Secrist.

ADDRESS OF WELCOME.—His Excellency George W. Peck, Governor of Wisconsin, delivered his address of welcome to the State. He had been commissioned, he said, by nearly two million people whose good fortune it was to live in Wisconsin, to extend a greeting to the members of the American Medical Association. Wisconsin, he said, was a State that most people had heard of, and more would hear of in the future. Besides containing within its borders everything necessary for man's comfort except gold, it was the healthiest place to be found on the habitable globe. Doctors were entirely unnecessary, and the Governor did not know why they ever came to this State, or how they made a living after they had come. The only reason there were any cemeteries here was because some people occasionally moved from other States after disease had got such a tight hold of them that Wisconsin had not time to cure them. Milwaukee, whose privilege it was to entertain the Association this year, was the eldest and fairest daughter of Wisconsin, and it was meet that she should greet her mother's guests and act the part of hostess. But the mother herself did not want to be forgotten, and she wanted her guests to remember that there were many other daughters nearly, if not quite, as fair, who would gladly offer a warm welcome to any of those present who could or would visit them.

The Hon. P. J. Somers, Mayor of Milwaukee, then delivered the address of welcome to the city. He spoke of the greatness of the country in material matters, and held that it should be the aim of our lawmakers to make it equally a leader among the nations of the earth in everything pertaining to the health of the community and of the individual. It was the duty of commonwealths and of municipalities to hold up the hands of members of the medical profession at all times, and especially during periods of threatened invasion of epidemic disease; and any public officials that did not do so to the full extent of their powers were guilty of nothing less than treason. In closing, the speaker expressed his best wishes for the success of the meeting, and extended a cordial greeting and welcome to the Cream City of the Lakes.

Dr. Wingate, on behalf of the Committee of Arrangements, presented a silver gavel, made in the shape of a brick, to the President of the Association, with the hope that he might keep it as one of the pleasantest mementos of a long and honored life.

THE PRESIDENT'S ADDRESS.—Dr. Hunter McGuire, of Richmond, Va., then delivered the annual address. Fifty years ago Henry Clay, while crossing the Alleghanies on his way to his Western home, stopped his horse on the summit of one of the highest ranges and gazed intently down into the beautiful Virginia valley whence he had ascended. To a companion who asked him why he stopped, he replied: "I am listening to the tramp of the millions coming across these mountains to fill the villages and prairies of the West." The multitudes now living and toiling in all parts of our lond bear witness to the prescience of this great statesman. Our country, though young, is yet old. The rush and activity of its people have expanded years into decades, decades into centuries and centuries into thousands of years, so that even now our institutions, young as they really are, have all the dignity and solidity of age. America is already among the first nations of the earth, and medical men here should do their part, and should see to it that their associations do not fall behind the other organizations of the country.

The prime object of the American Medical Association is to study the origin of disease, its nature, and its course, and to find out how best to prevent it and how to cure it when efforts at prevention have failed. But, secondarily, it is the duty of every member of the Association to aim at securing for the organization the greatest efficiency in its working. It is wrong to assume that disease and death are punishments inflicted upon man for his misdeeds. It is true that disease often does as a Nemesis, dog the footsteps of folly and crime. Yet that it does not attack the wicked alone, and that the innocents suffer as well, we have the word of the Great Physician himself. We are all subject to the workings of organic laws and to the penalties of infraction of these laws.

Medical men must gird themselves for combat against the spread of disease, and their first fight must be with those who prevent interference with their domestic life by the sanitary authorities. The individual must learn that his house is not his castle when it exists as a menace to the health of the community, and he must be taught that the sanitary police of towns and dwellings is essential in these days, and cannot be hampered in its working by any man's jealousy of interference in his own house when disease is present. Then, too, the profession has to overcome the apathy of the lawmaker and must secure legislation looking to the establishment and equipment of State and local boards of health. We have already accomplished much in the way of preventing outbreaks of disease and of restricting its spread, but we have yet much to do in this direction. There is a vast field for medical research in the study of disease in the United States. Malaria is one of these diseases. We know how much can be done by drainage in suppressing it, and much has already been done

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where drainage is possible. But a great promblem yet confronts us in the attempt to drive out malaria from the Lower Mississippi Valley, where the flat country, the bayous, and the marshes present such a fertile breeding-ground for the germs of this disease. This is a problem with which the civil engineer is chiefly concerned, but his efforts can be greatly aided by the advice and counsel of the skilled physician. The speaker urged upon his hearers the necessity of establishing medical societies in every county, city and township, and in every community where there are enough doctors to form such associations. The organization of the American Medical Association has improved each year, and he hoped that this improvement would continue. He argued that the special work be left more and more to the Sections, so as to give more time for the transaction of necessary business in the general sessions.

The Committee on Revision of the Constitution and By-laws, which was to make a report this year, would present some new features, and had left out some which he thought might better have been retained. He was glad that the report was not to be acted upon this year. The Committee on Revision of the Code will also ask that the settlement of the question be postponed until the next meeting. The speaker had his own views of this Code matter, but he would not express them at this time. He would, however, make one suggestion, namely, that the entire subject of the revision of the Code be reserved for final decision to the different State Societies in affiliation with the Association. The question was one of such importance that it ought to be settled only by a full, free, and equal vote of every man concerned. This could not be had at any meeting of this Association, for it was inevitable that wherever the meeting was held the local representation should be larger than that from a distance, and consequently the matter would be decided practically by the votes of member from a limited section of the country.

National Quarantine.—The question of national quarantine was one of great importance to every part of the Union. The people demand the passage of such laws as may render us safe against invasion by eidemic diseases such as cholera and typhus fever. The latter disease had recently crept into New York, thanks to the efficiency of the Board of Health in that city, had not become epidemic.

Last summer the country was threatened with an invasion of cholera, but escaped by a happy combination of circumstances rather than through the workings of a scientific quarantine system. Experience has shown that a strict quarantine will keep out contagious disease. During the Civil War all the Southern ports were closed, and none of them was visited by yellow fever, a fact by the way, which proves conclusively that this disease is not indigenous in the Southern States, but is always brought from without. The only open port in the South at that time was Wilmington, N. C., which had practically free communication with the outside world. Here yellow fever, imported from the Bermudas, raged with great fury. It will not do to leave the matter of quarantine in the hands of municipal authorities, for local interests are always paramount and will never be allowed to be sacrificed to those of distant communities. The doctrine of States Rights must go down before the necessity of a national quarantine law. This is a question that concerns the entire Union, and not merely one city or one State. If a pestilence should sweep our country, it would cost more in life and property than war with a foreign power, and we should take measures in time to prevent it. The speaker was not in favor of a quarantine of detention, but one of prevention. The modern system of quarantine rests not upon exclusion, but upon the sound principles of maritime sanitation. He referred to the quarantine at New Orleans as a model one of the kind; its efficiency is shown by the fact that yellow fever has been kept out of that city for twelve successive years, and yet the commerce of the port has not been interfered with.

He referred to the resolution, passed at a previous meeting, calling for the creation of a Department of Public Health, with a secretary having a seat in the cabinet. At the last meeting of the American Public Health Association a somewhat similar resolution had been passed. But as yet Congress had done nothing in this direction. Bills had been introduced in both houses, but had not yet reached a hearing.

In concluding, Dr. McGuire expressed his appreciation of the honor that had been conferred upon him in his election to preside over this meeting of the Association and hoped that the members would look with indulgence upon his shortcomings.

Upon motion the Address of the President was referred to a committee for consideration of the recommendations contained in it.

Mr. Ernest Hart, editor of the *British Medical Journal*, was then introdnced and made a few remarks. He said that he brought a greeting to this society from the British Medical Association, from which he came as a delegate. The proceedings of the American Association were watched with deep interest by medical men in Great Britain, and the efforts of American physicians to uphold a worthy ethical standard called forth the sympathy of their *British confreres*.

The report of the Treasurer showed a balance on hand of $5,844.68.

The Committee on Secretary of Public Health reported progress. Congress had adjourned without taking any action on the bills which had been introduced creating a department of Public Health, and the bills were still in committee. It requested that the Association continue its efforts to secure the establishment of this department of the National Government. The report also asked for the appointment of a committee of ten to wait upon President Cleveland, and request him to incorporate a recommendation to this effect in his next Annual Message to Congress. On motion the report was adopted and ordered to be printed in the

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journal. The chairman was also empowered to fill any vacancies in the Committee, which it was announced contained some dead timber that had better be gotten rid of.

THE PAN-AMERICAN MEDICAL CONGRESS.—Dr. Charles A. L. Reed, Chairman, presented his final report. The organization of the Congress has now been completed in every State and Territory of the United States, and in every other country and colony in North and South America, including the West Indies and Hawaii. The President of the United States will open the Congress in person, and will receive the delegates at the White House. The titles of several hundred papers, and in most cases the abstracts of the papers as well, have already been received, so that the success of the meeting is assured. Many advance registrations have already been received, and the Committee desired to thank those who had responded thus early to their appeal, and had lightened their labors in that way. But a large sum is yet needed to meet the absolutely necessary expenses of organization, and Dr. Reed urged those who had not yet done so to send their subscription fees of $10 to the treasurer of the Congress. The Committee thanked the Association and the medical press of the country for efficient aid in promoting the success of the Congress.

SECOND DAY, WEDNESDAY, JUNE 7.

The meeting was called to order by the President.

Invitations were received from Asbury Park and from Hot Springs to hold the next meeting in their respective cities.

ADDRESS ON GENERAL MEDICINE.—Dr. Hare delivered the address. He said that a correct diagnosis is necessary to successful treatment. In arriving at a diagnosis a microscopical examination of the blood is useful, as is also the chemical examination of the contents of the stomach in certain cases. At this day there is no excuse for dodging, and the shotgun prescription is a confession of ignorance. Improvements in diagnosis and in treatment have kept pace with each other, and although the gains have not been by leaps and bounds, yet they have been sure. The speaker discussed the subject of anemia and its treatment. It is well known that what was useful in some forms of anemia and not in others, but no satisfactory reason for this was put forward. It is now known that in one form of the disease there is a deficiency in the number of the red blood corpuscles, while in another the trouble is rather in a reduction in the amount of hemoglobin. It is in the latter form that iron is useful, In passing, the speaker protested against the frequent abuse of iron, against the giving of the drug when it is not indicated, and against the exhibition of too large doses, as there are only about thirty-nine grains of iron, all told, in the blood, and doses of ten or twelve grains a day are absurd.

Many conditions formerly regarded as diseases are now known to be only symptoms. Asthma is one of these conditions, and in every case the cause, though obscure, will always be found if sought for. Another condition which is gradually passing from the dignity of a disease to the place of a symptom is diabetes mellitus. Shock is often wrongly treated because it is not understood. Death rarely occurs in the first stage of shock; that of vagus irritation; in the second stage the whole arterial system is relaxed, and this is the most dangerous condition. Here belladonna is useful. In epilepsy we have found how the bromides act, so that now they are given scientifically instead of empirically. Quinine was formerly given empirically in malaria; now it is known that the drug kills the germ of the disease.

Among recent advances in therapeutics the speaker referred to the use of animal extracts, especially of thyroid extract in myxedema and cretinism.

REPORT OF THE TRUSTEES OF THE JOURNAL.—The Trustees said they had had it in mind to improve the Journal, but had been unable to do so on account of lack of funds. The expenses of the Journal had been a little over twenty four thousand dollars, and the receipts between sixteen and seventeen thousand, leaving a deficit of some $7,500. There were about five hundred subscribers, and something over four thousand copies were issued to members, but about five hundred of the latter would have to be cut off.

REPORT OF THE COMMITTEE ON REVISION OF CONSTITUTION AND BY-LAWS.—The Committee submitted the draft of a new constitution and by-laws which it thought would, if adopted, promote the development of the Association and advance the interests which it represents. The key-note of the proposed changes, the Committee explained, was "the advancement of scientific medicine as represented in the Sections." The Executive Committee of the various Sections form collectively a Business Committee of the Association. It shall be the duty of this Committee, the new constitution provides, to seek the removal of any obstacles that interfere with the cordial co-operation in the Association of all competent, honest practitioners of rational medicine throughout this country. Further. this Committee shall make and present the nominations for officers and standing committees of the Association, and recommend the time and place of the ensuing meeting. Thus the practical government of the Association is taken away from the members by States and placed in the hands of the same members grouped as specialists. It was believed by the Revision Committee that the officers and place of meeting so obviously affect the prosperity of the Sections that it would seem wise for the latter to make the recommendations. Radical changes are also made in the conditions of membership which is hereafter to be limited to members of the several affiliated State Medical Societies. Any man who is a member in good standing of a recognized State Society is entitled to membership in the National Association upon payment of the dues. The question of his worthiness is left absolutely to the State Society, the Association requiring only that he pay his dues.

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The time allotted to the general session is to be greatly reduced, while that devoted to Section work is stretched out to the greatest possiple extent.

In concluding its report the Committee expressed a hope that it would be adopted, believing that the new features would provide for more satisfactory transaction of all business coming before the Association. By adopting this new constitution the society would have provided for the study of every question by experts previous to its consideration by the general body. It would thus be able to act with more tact and wisdom. Further, the adoption of the proposed constitution would promote the best interests of the Association, of its Sections of scientific medicine, of the several tate Societies, of every intelligent practitioner of medine, and hasten the organic unity of the profession of he entire North American continent.

The report was at first signed by all members of the Committee, namely, Drs. H. D. Holton, Leartus Connor Daniel E. Nelson, Benjamin Lee, and H. D. Didama. The latter gentleman subsequently withdrew his name, but this did not move the other members of the Com mittee, who stated that they were more than ever convinced that the alterations proposed are vital to the best prosperity of the Association. They therefore commended the new constitution to the favorable consideration of the society.

Dr. Didama made a minority report. After having signed the original report he had changed his mind and now disapproved of some of the radical changes therein contained. He believed the government of the Association should rest in the hands of the delegates from the different States, and he also believed that the taking from them of the right to appoint the Nominating Committee would be unfair, unjust, and unsatisfactory.

According to the provisions of the constitution both reports will lie on the table until the next annual meeting.

The Committee on Revision of the Code then made its report. It asked for further time to make its full report, but in the meanwhile it would suggest:

1. The omission of all sections of the Code that describe the obligations of patients to their physicians and of the public to physicians. The reason for this uggestion is that the Code is not designed either for patients or for the public, and so the sections are superfluous.

2. To place in the same list with the copyrighting of medical books and other similar works the patenting of all mechanical appliances used in medicine or surgery. The Code says nothing respecting the copyrighting of medical publications, and the Committee could find no good reason why it should say anything respecting the patenting of mechanical devices.

3. To define more accurately the term "consultation," since the present conditions of medical consultation differs widely from those of forty or more years ago. The committee recommended the alteration of Article IV, Section I, of the Code to read as follows: "A thorough medical education furnishes the only presumptive evidence of professional abilities and requirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as the good of the patient is the sole object in view, and this is often dependent upon personal confidence, no intelligent practitioner who has a license to practice from some medical board of known and acknowledged legal authority to issue such license, and who is in good moral and professional standing in the place in which he resides, should be refused consultation when it is requested by the patient."

4. To rewrite the Code in phraseology so plain as to make it a practical common-sense document for daily guidance.

5. To have the Code taught as part of the regular curriculum in medical schools.

This Committee was the same in constitution as the one on revision of the by laws, and in this, as in the other, Dr. Didama made a minority report. He said it was no excuse to strike out part of the Code to say that it was not made for patients and the public. The public should be taught the Code so that they may know their duties. The minority report was in brief a protest against any revision of the honored Code of Ethics of the American Medical Association.

Third Day, Thursday, June 8.

The session was called to order by the President at 11 o'clock.

The Address on Surgery was delivered by Henry H. Mudd, of St. Louis, the subject which the orator chose for his address was "Surgical Problems." It is not the new that is always the most valuable in surgery, and often what is thought to be new is in reality old. The three problems which the speaker proposed to discuss were drainage, the radical cure of hernia, and appendicitis.

Drainage.—The question of drainage and drainage-tubes is one that has been discussed by leaders in surgical work for many generations, though it is only within perhaps the last twenty years that the data necessary for the solution of this problem have become in a measure definite. Since the necessity for surgical cleanliness has become a dogma we have learned that drainage is not an essential to the rapid healing of even extensive wounds. No intelligent surgeon will discard the use of drainage in the treatment of suppurating wounds. The question has been narrowed down to that of the use or abuse of drainage in aseptic operation wounds. Union by first intention may be expected in a clean, incised wound, not vitiated by applications, with hemorrhage controlled, with perfect approximation of the divided tissues, and with rest of the individual and of the injured part. But with all these conditions fulfilled, there still remain two essential factors to success, viz: a vital power in the individual sufficient to insure the establishment of initiative processes and a proper resisting power of the parts involved in

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the wound. The speaker did not believe that we could dispense with the drainage.tube in all the so-called clean wounds, for the above conditions cannot always be secured. The question of hemostasis is often a serious one, as it takes time and thus prolongs the period during which the patient is under the influence of the anesthetic. Perfect approximation of the incised tissues also consumes valuable time. Thus while healing without drainage is the ideal wound treatment, it is not always to be desired, if it can be secured only at the expense of the patient. The danger of infecting the wound through the drainage tube is more apparent than real, when the latter is removed at the end of from one to three days. It is not necessary to retain the tube until all secretion from the wound has ceased, for the tube is itself an irritant and will often keep up a discharge that would otherwise soon dry up. Soap, water and heat excluded, the speaker would rather dispense with all antiseptics than with the drainage-tube in certain cases, yet the use of the latter is becoming more and more limited.

Radical Treatment of Hernia in Children.—A permanent cure of hernia is often brought about by the use of a truss, and this measure should always, when possible, be given a trial. In the case of adults, however, the conditions are different, and a radical cure by means of the truss is an improbable event. The very fact of the multiplicity of methods advocated for the radical treatment of hernia is a proof that the problem has not yet been satisfactorily solved. The mortality attending the operation is so low (about one per cent.) as to justify its undertaking. If the majority of the cases are permanently cured, making all necessary deductions for ultimate relapses, it may be stated that permanent recovery ensues in from sixty to eighty per cent., a sufficient number to justify the operation. Of all the methods that of Macewen alone permits of the retention of the hernial sac, for it is generally agreed that the obliteration of the sac is essential to a perfect result. The important point in guarding against the recurrence of the hernia is the destruction of the normal irregularity in the abdominal wall formed by the transversalis fascia and the muscles of the internal abdominal ring. This can be most effectually accomplished by closure of the canal and removal of the cord to a new point for its passage through the abdominal wall. Operators differ in their choice of the opening for the cord, but the preferable point would seem to be one to the outer side of the canal near Poupart's ligament. In certain cases, however, it may be better to carry it well in toward the median line. The union of the tissues of the weakened abdominal wall should be sought by primary union rather than by granulation, as the former is stronger. The speaker preferred buried animal sutures to permanent sutures of silk or wire. The following were Dr. Mudd's conclusions: The mortality should not deter us from encouraging the operation for the radical cure of hernia; 2, the percentage of recoveries is sufficient to justify it; 3, the removal of the sac is an essential feature of the operation; 4, the approximation of the tissues in the weakened abdominal wall is no less important; 5, the surgeon cannot urge the operation in every instance, but may perform it in a great majority of cases where a truss does not sufficiently control the hernia.

Appendicitis.—The treatment of this disease is still an open question, and one that is most difficult to decide, because of the difference in individual cases. The anatomical and clinical investigations of recent years have demonstrated very clearly that the American view of the pathology of inflammation in this region is correct Primary inflammation of the appendix is frequent, and it not only produces ulceration and destruction af this portion of the bowels, together with circumscribed or diffnse peritonitis, but often also determines a perityphlitis and a typhlitis with engorgement and thickening of the walls of the ileum. The vast majority of inflammations in the right inguinal region originate in the appendix; they result not so much from concretion in the appendix as from irritative catarrhal obstructive conditions which produce engorgements of its mucous coat and thickening of its wall. The presence of irritating fluids containing the bacterium coli of fecal matter or of a foreign body may excite inflammation, as may also a disturbance of the circulation resulting from a bend or a twist in the apendix, or from the pressure of a distended bowel. The inflammation caused by this disturbed circulation may disappear upon the removal of the exciting condition, and resulting congestions may be evanescent in character. An ulcer of the appendix, caused perhaps by a foreign body, may lead to perforation without giving rise to any previous symptoms of inflammation or causing much pain in the abdomen. Circumscribed peritonitis may arrest the action of the ileum and colon, and by agglutination of the parts establish a tumor with doughy or elastic outlines, suggesting an intra-peritoneal abscess. This tumor may disappear as the peritonitis subsides and peristaltic action becomes re-established, or it may cause death by rupture and escape of its contents into the peritoneal cavity. The duration of a given case cannot always be predicted from the symptoms, for a free appendix may rupture and discharge its contents into the abdominal cavity, causing death within a few hours of the first warning symptom. A severe colic and other signs of grave local trouble may attend a case which rapidly and permanently recovers. The situation of the appendix is a fact of some moment in the outcome of inflammation, for when it is behind the head or body of the colon the result is generally much less grave than when it hangs somewhat freely from the colon, and is in more intimate relation with the small intestine. The latter condition exists in about seventy per cent. of all cases, but as an offset to this it has been found that inflammation occurs less frequently in the appendix surrounded by the small intestine than it does in that which is held in close relation with the colon. There is grave danger

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in waiting either for the recession of the inflammation or for the development of a well-defined abscess.

Since we can never predict with certainty the result of the inflammation from the signs present in any given case yet we all know that many cases with grave symptoms recover without operation. If a definite rule for action must be outlined, then logical deduction and medical experience will demand an operation in every case of appendicitis, or they will deny operative interference until perforation has formed and is seeking exit by an external opening. The first alternative is very often denied the surgeon, the patient preferring the chances of recovery without cutting; yet the safe operation is made only early in the course of the disease, or later when the abscess is clearly defined. The intermediate period is one of danger to the patient and of anxiety to the surgeon; we must wait for a definite solution of this difficult problem until more voluminous statistics are at hand, and these, deceptive as they are, must finally determine our line of action.

Three Factors of Success in Surgical Operations.—The fate of wounded tissue, whether the injury has been inflicted by accident or by design, depends upon three factors, namely: 1. The vital power of the individual; 2. The condition of the parts involved; and 3. The amount and character of the bacterial infection. The appearance of antiseptic surgery was an event of vast and overshadowing importance, and surgeons fell so far under the influence of the new doctrine as to forget that other conditions entered into ths determination of the results of their operations. But nature's laws are persistent and we are learning again that the vital resisting power of the individual is a factor that cannot be overlooked. This mysterious power has even been a source of confusion as well as of strength to the surgeon. It has won his battles in spite of ill-advised surgery, and it has brought death when everything possible to avoid it has been done. The local resistance established through the action of phagocytosis at the sight of the wound supplements the surgeon's efforts for antisepsis, and makes possible the grand success which has attended the enforcement of these modern methods of cleanliness. The speaker, dwelt with special emphasis upon the importance of not overlooking, in our enthusiasm for antisepsis, the two other great factors, to-wit: the vital power of the individual and the local resistance of the issues involved. No one can predict with absolute certainty the result of any surgical interference in the human body. The most skillful surgeon who has taken advantage of everything his knowledge and experience could suggest to make his operation a success will occasionally meet with defeat, and an operation is therefore not to be lightly undertaken, and it is only the existence of serious disease that will justify grave surgical procedures.

Address on Cholera.—Mr. Ernest Hart, of London, then read, by invitation, an address entitled "Cholera, an Exclusively Water borne Disease." This is, he said, a filthy disease caused by dirty people in dirty places and spread by dirty water. Cholera may be drunk, or it may be eaten, but it cannot be caught. It does not spread from person to person, but its diffusion occurs through the medium of food and drink. If the water supply of a locality remains uncontaminated, cholera cannot rage here. In epidemic form every cholera death is a death by poison, and the municipal authorities or water companies should be held responsible in case of epidemic, and should be proceeded against by criminal indictment or by civil action for damages.

Quarantine, maritime, or land fumigations, sprinkling with antiseptic fiuids and the like are useless. Maintain the purity of the water-supply and there need be no cause for alarm as regards cholera. The safeguard against the disease is purity of air and water but especially the latter, for cholera is a water borne disease.

Officers for 1894.—The Committee on Nominations reported the following:

President—James F. Hibbard, Richmond, Ind.

First Vice-President—John C. Wyeth, New York.

Second Vice President—I. N. Love, St. Louis.

Third Vice-President—Thomas Murrell, Little Rock, Ark.

Fourth Vice-President—U. O. B. Wingate, Milwaukee.

Treasurer—R. J. Dunglison, Philadelphia.

Secretary—W. B. Atkinson, Philadelphia.

Assistant Secretary—L. H. Montgomery, Chicago.

Librarian—George W. Webster, Chicago.

Editor of Association Journal—Dr. Culbertson, Chicago.

Trustees to fill vacancy of those whose term expired this year—Sohn B. Aamilton, Ill.; E. F. Ilgalls, Ill.; L. McMurtry, Louisville.

Members of Judicial Council—J. N. Quinby, Jersey City; J. McEadden Gaston, Atlanta, Ga.; A. F. Jonas, Omaha; H. J. Murphy, St. Paul.

San Francisco was proposed as the place of next meeting in May, 1894. But this suggestion called forth a strong opposition. It was held that matters of vital importance to the Association were to be decided next year and it would be impossible to have a full representation at so remote a point.

Ventilation has long been regarded as a valuable aid in disinfection, but it has remained for a Frenchman to make careful experiments to determine just how much ventilation a room requires to rid it of microorganisms. He finds that when a room is simply aired in the usual manner, renewing the air two or three times every hour, the microorganisms do not entirely disappear from the room during a whole summer, and in winter the case is much worse. A renewal of the air six or seven times an hour carries off most of the germs but in order to rid a room of it completely a strong draft is necessary. Even this does not carry off the microbes from walls, hangings and furniture, which must be dealt with separately by washing with disinfectant solutions.

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NOTES AND ITEMS

Strychnine for Snake Bite.—E. A. Thomas, M.D., Assistant Surgeon, Nagino, India, reports, in the *Indian Medical Record*, five consecutive cases of bites by poisonous snakes, in which prompt recovery ensued upon the administration of strychnine, in full doses, repeated hourly until out of danger, which was usually determined after the third dose.

Oophoritis and Mumps.—While orchitis is common after parotitis, inflammation of the ovaries is rare. Dr. Comby (*Progres Medical*) has collected a series of cases in which intense pain and swelling occurred in the ovaries in women with mumps. Boulellier describes a case in which a woman suffering from mumps felt pains in the right iliac fossa, and a tender body, larger than a normal ovary, made its appearance. Inflamed mammary glands are sometimes found intercurrent with mumps.

Operative Interference in Peritonitis.—While laparotomy in the acute stages of peritonitis has found its advocates of late, the voice of abdominal surgeons generally is loudly against it. Dr. Eastman of Indianapolis (*Journal of American Med. Assoc.*) condemns it strongly. "In the earlier stages of septic peritonitis (and all inflammation is of septic origin), surgical interference is but adding fuel to the flames. After the patient has been tided over the acute stage of the disease, to the time when the micro-organisms have become less active, surgical efforts may be curative by removal of the localized products of inflammation. Cases have come to my knowledge where practitioners anxious to obtain the prestige presumably gained by abdominal section, have ventured to open the swollen abdomen with no definite idea what they were going after, where they were going to locate it, or what they were going to do with it, after they had found it. After opening the abdomen freely, with the hope that they might see something which the fingers had not been able to feel, they found the intestines distended with gas, piled up in formidable stacks over the abdomen and even falling down on the table. Their position was something like the man who attempted to repair the clock; he had no difficulty in taking the clock to pieces, but when he attempted to put it together again he imagined he had wheels enough for fourteen clocks."

Cystophotography.—Quite a commotion was produced at a recent meeting of the Berlin Medical Society (*Occid. Med. Times*), when Dr. Nitze for the first time exhibited his photographs of portions of the human bladder, obtained from living subjects by the aid of the cystoscope. Nor was the enthusiasm of this otherwise so dignified and stately assembly unmerited. I have before me at thn present moment five such photographs representing respectively the normal mucous membrane with the orifice of a ureter; a polypus tumor in a *vessie a colonnes*, a papillomatous growth, a tuberculous ulcer, and a phosphatic concrement, all of which are plainly recognizable as such at first sight. The novelty of this achievement is not more surprising than the excellence of execution. Abortive attempts, have, it is true, been made by other observers, but these pictures are the first possessing any real practical value. As a means of exact clinical record, for teaching purposes, for a better understanding of the condition of the bladder under pathological and physiological circumstances, this departure, which is the result of prolonged, ingenious and painstaking labor, will everywhere be welcomed warmly. Bladder diseases have, until recently, often presented the greatest difficulties of diagnosis, but now they are laid open to the most accurate and reliable investigation. For this we are in a great measure indebted to Nitze's former untiring perseverance in perfecting the cystoscope, which is crowned by his present valuable discovery of the method of cystoscopic photography.

Treatment of Diphtheria With Serum.—Behring (*Brit. Med. Jour*) discusses the action and dosage of the diphtherial immunized serum, and gives the results of its trial in 30 cases. The material used in these cases was a serum to which he applies the term "normal diphtherial therapeutic serum." Of the 30 cases 24 recovered and 6 died, a mortality of 20 per cent. Kossel gives full details as to 11 of these cases which were treated in the Infectious Disease Institute (Koch's) in Berlin. Two of the cases died; both were very severe cases, and reasons are given for believing that in one aged 4, death was due to septicemia; in the other, aged 3, it was necessary to perform tracheotomy immediately after admission, and the patient died four days later with extensive infiltration of the wound ond cyanosis. Post mortem it was found that the membrane had extended into the bronchi and that tuberculosis also was present Among the 9 cases which recovered were 3 in which tracheotomy was performed. These three children were aged 3, 9, and 5 years respectively, the last being a very severe case with albuminuria and cyanosis In 6 cases the membrane was present chiefly on the tonsil. In estimating the value of the serum, Kossel lays stress on the fact that 3 out of 4 cases recovered after tracheotomy—a very unusually high proportion. The serum was injected under the skin of the front of the chest. In every case but one the quantity given at at the first injection was 20 c.c.; at subsequent injections —and in the eleventh case on the first occasion—the quantity used was 10 c.c. The largest number of injections in any one case was five, the quantity of serum injected being 50 c.c.; in this case the injections were given on admission, on the two following days, and on the fifth day. Gentle massage of the skin was used after the injection; beyond slight tenderness at the point of injection no unpleasant effects were noted.

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Period of Incubation of Chicken-Pox.—Dr. John J. Eyre writes to the *British Medical Journal* that November 18 Mrs. M., residing at Hampstead, accompanied by her little boy, visited a married sister at Streatham. They stayed at Mrs. O.'s house about three hours. Soon after they left Mrs. O. found that one of her children had red pimples on the body. The doctor who saw the child next day discovered that she was suffering from chicken-pox. Mrs. M.'s child was taken ill with the disease December 2, and the rash appeared December 3. The writer regards the case, though it is an isolated one, as worthy of record, bacause, first, it enables us to definitely declare the period of incubation to be fourteen days; and, secondly, it proves that chicken-pox is infectious directly the rash appears.

Rags.—Dr. Paul Gibier (*Ther Review*) was asked to examine some "disinfected" old German rags, imported into New Xork from Bremen. The microscope showed among other things, blood cells and bacteria. Cultivation developed colonies of eleven different micro-organisms, found alive, on these "disinfected" rags! Among them were the bacilli of tuberculosis, staphylococcus albus and a streptococcus resembling that of erysipelas and pathogenic for rabbits. The living germs in the thirty grains of rags were not less in number than 200,000,000 to 400,000,000. Dr. Gibier concluded that the rags came from a hospital.

A reference to our files will show that we have most earnestly protested against the importation of foreign rags during epidemic prevalence in Europe, and warned against the trust in disinfection.

Electric Tests for Urine.—Dr. Lawson Turner is strongly in favor of the electrical examination of urine, and considers it to be much more accurate and convenient in determining the amount of urea than the ordinary mode (N. Y. *Med. Times*). The method is to place the urine in a V-shaped tube, this being connected with a measuring bridge. The resistance in urines depend mainly on the presence of chlorides. He recently instanced a case of pernicious anemia where the urine had a specific gravity of 1.017, 9.36 grains urea per ounce, on one day, and specific gravity 1,020, and 7.02 grains urea, on another. From this nothing definite could be deduced; whereas much could be learned when one was told that the specific resistance in the one case was 68 and in the other 51 ohms. He has determined the electrical resistances of various artificial fluids, and finds that a three per cent solution of urea gives a specific resistance of 382.5 ohms, a two per cent solution a resistance of 569.5 ohms; a two per cent solution of sodium chloride gives a specific resistance of 29 25 ohms, a one per cent. solution 59.5 ohms; a two per cent solution of sodium chloride mixed with a 20 per cent solution of grape sugar gives a specific resistance of 51 ohms. The specific resistance of distilled water is found to be infinite and that of ordinary spring water enormous.

The Digestible Cocoa of the Chas. H. Phillips Chemical Co., of New York, is fast gaining favor as a valuable nutrient in cases of wasting diseases. See ad on colored page.

The Caledonia, as the model hospital of Dr. J. H. McIntyre is called, continues to maintain its well-earned prestige as a model institutiou of its kind, especially adapted to surgical cases. See ad page.

The Delirium of Fevers.—Neurosine excells the so-called coal tar products in quieting the delirium of fevers with absolutely no deleterous effects upon the stomach or depressing action upon the heart. See advertisement.

The Elixir Six Iodides, prepared by the Walker-Green Pharmaceutical Co., is an excellent formula and has established itself in professional favor as a *tonic* and *alterative*. We ask our readers to give it a careful and considerate trial. See ad page.

Listerine has made a proud record for itself during the late St. Louis epidemic of what was called typhoid fever. By virtue of its antiseptic propertief it enabled all those cases, in which it was used, to make speedy and complete recoveries. See on ad page.

Imperial Granum as a food for invalids and infants has made for itself a host of friends. It differs a great deal from the ordinary artificial foods in the fact that it is not only palatable but easily assimilated, qualities of the most desirable nature in such a preparation.

A Good Buggy Case is almost an indispensable adjunct to the doctor. The country practitioner cannot do without it, and what he needs is one upon which he can rely for durability. Such are made by the St. Louis Leather Works whom we can recommend to our readers.

Scott's Emulsion of Cod Liver Oil is one of the staple remedies which has become an indispensable adjunct to the doctor's armamentarium. Messrs. Scott and Bowne has certainly succeeded in making a reliable product which is palatable and efficient. See ad on colored page.

Coca is so well known and its properties are so universally recognized that it is unnecessary to dwell upon these subjects. What is not so well known, perhaps, is that Mariani & Company make a wine which is not only pleasant to take, but includes as well, all the good properties of the plant in a palatable and efficient form, See ad page 3.

Chemical Food is a mixture of Phosphoric Acid and Phosphates, the value of which Physicians seem to have lost sight of to some extent, in the past few years. The Robinson-Pettet Co., to whose advertisement we refer our readers, have placed upon the market a much improved form of this compound, "Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

The Surgical Instrument House of Codman & Shurtleff, Boston, Mass., need no introduction, as they have for years enjoyed the reputation of being the leaders in their line. Among their specialties we find a New Tablet Hypodermic Syringe, New Urinary Test Case, Vaporizing Atomizer, The Vasol Atomizer, and many other improved instruments and apparatuses. We would call our readers' attention to their advertisement, and suggest they write to them mentioning the MEDICAL REVIEW.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

Enterectomy for Obstructive Epithelioma at the Ileo-Cecal Valve; Secondary Anastomosis Operation by Abbe's Long Incision.

BY JAMES M. BARTON, A.M., M.D.,

Surgeon to the Jefferson College Hospital and to the Philadelphia Hospital.

Read before the Philadelphia Academy of Surgery.

I saw Mr. B. for the first time on April 18, 1892, at Millville, N. J., in consultation with Drs. Smith and Newell. He was in bed, was very pale and thin, and had frequent attacks of sharp pain while we were talking to him. I obtained the following history: He was twenty-seven years of age, and had been in his usual health until the first of January, when he had an attack similar to the present one, lasting one week. From then until the latter part of March he was able to attend to his work in the glass house, but was troubled with some pain and considerable tenesmus. He went to the water closet from four to eight times daily, passing, with difficulty, a few small scybala each time. His constipation increased until four weeks ago he had several attacks of complete obstruction, each lasting four or five days, and only relieved after taking many purgatives.

He now has and has had for the last two weeks about four diarrheic passages daily. He has severe attacks of cramp in the right iliac fossa every few minutes, requiring the constant use of large doses of morphia. These attacks are accompanied by a half inch elevation of the abdominal walls over the painful point. As the pain leaves, the abdominal wall descends, and gurgling of wind is heard and felt. He has been confined to his bed for two weeks and is greatly exhausted. There is elevation of temperature no tenderness on pressure, and there is no tumor felt, though carefully searched for. There has been no vomiting at any time.

From the absence of vomiting and the marked tenesmus present, I regard the obstruction as being in or near to the beginning of the large bowel; that it was not far from the ileo-cecal valve was shown by the elevation of the abdominal wall at this point by the obstructed gas. The diarrhea was an evidence of an intussusception, and the very short time the symptoms had existed, and the very complete obstruction present, pointed to a malignant growth as the cause of the intussusception.

Two days later I again visited Millville for the purpose of removing the growth. I was assisted by Drs. Newell and Smith, of Millville, Dr. Jones, of Camden, and Mr. Borsch, a student at Jefferson College. An incision about three inches long was made in removing the appendix. On introducing the finger the growth was found at once. Intussusception could not be reduced, as the epithelioma had grown since it had occurred. After incising the bowel to verify the diagnosis, I removed about six inches of the intestine, including the obstructing epithelioma. Preparation had been made to perform lateral anastomosis at once, but the patient was so severely shocked that the operation was terminated by a temporary artificial anus.

He recovered without difficulty, rapidly gaining flesh and strength, and came to me, in Philadelphia, in June, to have the anastamosis operation performed. I placed him in a private room in the Jefferson College Hospital and on the 16th, I operated assisted by Drs. Ashton, Fisher, Mr. Borsch, and the house staff. My purpose was to make a long opening, by the method devised by Dr. Abbe, between the lowest possible portion of the ileum and the highest and most convenient portion of the colon; to permit the artificial anus to remain as a safety valve and only close it after the anastomosis opening worked satisfactorily. In order to determine where to make my incision, I probed the bowel at the artificial anus, some days before the operation, with various sounds and catheters, and found it ran directly across the abdomen to the left iliac fossa. As I could not hope to join this to the ascending colon, I decided to use either the transverse colon or the sigmoid flexure, and to open the abdomen by a short incision to the left of the left rectus, as being within reach of both these portions of the large bowel and directly over the portion of the small bowel I wished to use, but far enough from the artificial anus to escape the risk of infection. This was an error, the incision should have been made in the median line, rather higher than I did make it and long enough to get a fair view of the intestines.

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Just before opening the abdomen I introduced a sound into the artificial anus, so that I might be able to verify, without delay, the portion of the ileum I wished to use after the abdomen was opened.

A three-inch incision was made about two inches to the left of the median line and parallel with it, ending just above Poupart's ligament. The ileum, with the bougie in it, was readily identified, and as the transverse colon hung well into the wound, the sigmoid flexure was not searched for. After stripping the portions of the bowel I intended to use of their contents, and preventing their return by a temporary rubber ligature, the ileum and colon were laid side by side and joined by a line of suture five inches long; when completed the needle was removed and the unused thread permitted to remain. A second line of suture, four and a half inches long, parallel and close to the first was introduced, and the unused threads were also permitted to remain.

Both bowels were then opened by a four-inch incision about a quarter of an inch from the last suture. A third suture was used to join the edges together, passing each stitch across the freshly divided edges so as to check the bleeding. This stitch is known among seamstresses as a "whipping stitch." The pliability of the intestines is such that not only the distal edge can be so closed, but a large portion of the edge on the side of the incision toward the operator. A needle was now placed on the unused thread attached to the second line of suture, and this was continued around the ends and in front of the opening, joining the intestines together at about a quarter of an inch from the opening and parallel to it. This suture, when completed, entirely surrounds the opening, and is about a quarter of an inch from it. Lastly, the unused thread of the first suture, which was still hanging at the end, has a needle put on it, and it is carried around the ends and in front of the opening. This suture when completed also surrounds the opening and is about half an inch from it.

The operation can be quite rapidly performed, the intestines being held in contact, by an assistant. After the first line of stitching is made it is still easier, and the suture can be made nearly as fast as the same operator would sew a seam in muslin.

The whole operation was performed with a constant stream of tepid boiled water flowing over the intestines we were joining together. As soon as the stitching was completed the intestines were replaced in the abdominal cavity, which was thoroughly flushed, and as the sutured intestines laid in position without undue strain, the abdomen was closed.

The slight vomiting after the ether soon ceased. A number of ounces of fecal matter passed from the artificial anus, but less than before the operation. At the expiration of twenty-four hours there was occasional regurgitation of fluid from the stomach, and when I saw him at 8 o'clock on the second morning, the regurgitated fluids had become coffee-colored. An hour later, forty-three hours after the last operation, I reopened the wound, but failed to find the cause of the obstruction. The sutured intestines laid quite stiffly in place, being kept so by the numerous lines of sutures and the resulting plastic deposit, the small intestine was rather sharply flexed at the extremity, but not enough to obstruct. After as full a search as the condition of the patient warranted, it was concluded that the obstruction must be at the sutured portion. A loop of the ileum above the anastomosis was therefore drawn into the wound and another artificial anus made, but the obstruction was unrelieved, neither gas nor fecal matter passed, and the patient died forty-eight hours later, or four days after the operation.

At the post-mortem there was no evidence of recent peritonitis anywhere, the cause of all the difficulty being an old adhesion of the ileum to the abdominal wall at the left iliac fossa. Trailing the ileum up from the original artificial anus in the right iliac fossa, it ran directly across the abdomen to the point of attachment in the left iliac fossa, making a tense band; it then ran downwards, and six feet were in the pelvis. I had drawn about two feet of these six under the band and used them for the anastomosis operation. The remaining four feet, still in the pelvis, were sloughing, its circulation being entirely shut off by the band. All the parts above the band, including the intestines used in the anastomosis operation, were in admirable condition. The immediate cause of the obstruction was the increased tension of the band, produced by pulling another loop of intestine under it at the operation. The band would probably have given trouble even if the anastomosis operation had not been performed.

The result in this case has not made me feel dissatisfied with the operation. I still think that it is the only tried method of obtaining a sufficiently large opening between intestines. Any smaller opening, no matter how made or with what devices, will be apt to contract and obstruct.

The Abbe operation can be quite rapidly performed. In the case above narrated, the patient suffered from no appreciable shock, though he had but recently recovered from a nearly fatal illness.

In performing this operation again I should make the incision in the median line, and make it higher and longer, so that I might not only see the condition of the intestines, find any abnormal adhesions, but before joining the intestines I should place them in position in the abdominal cavity to that they might lie without strain or tension. The intestines when joined by six lines of sutures are as unyielding as if there were a piece of card-board between them five inches long. If the intestine does not lie easily in its new postion, the bowel at one end or the other of the stiffened portion may be so sharply flexed upon itself as to cause obstruction. In addition, from the same cause, there may be unnecessary strain upon the sutures.

The sutures in the above case were severely tested, the transverse colon was pulled upward by the gastro-coelic omentum, while the ileum, a few inches below

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the suture, was fast anchored by the adhesion. This strain was greatly increased by the subsequent abdominal distension and frequent vomiting. But as the specimen, which I here exhibit, shows, it held perfectly.

The specimen removed at the enterectomy shows almost complete obstruction, the opening that remains being less than a quarter of an inch in diameter.

Two Cases of Amputation at Shoulder-Joint in Which Wyeth's Pins, to Control Hemorrhage, were Used.

BY JOHN H. BRINTON, M D., PHILADELPHIA.

Read before the Philadelphia Academy of Surgery.

CASE I. OSTEITIS DEFORMANS OF THE LEG, FOLLOWED AT THE EXPIRATION OF TWENTY-THREE YEARS BY SARCOMA OF THE HUMERUS; AMPUTATION AT SHOULDER-JOINT BY THE OVAL METHOD; USE OF WYETH'S PINS TO CONTROL HEMORRHAGE; DEATH ON THE TENTH DAY.—E. B., aged forty-eight years; born in Massachusetts; publisher. About twenty-three years ago he noticed tenderness over the right tibia, increased by pressure, by severe or prolonged exercise, and by barometric changes. Various anti-rheumatic measures were employed, but without avail. The limb did not become much worse, he was able to be about and follow the business of his life for years. During this time he was not lame, but experienced a sense of weakness in the limb. To use his own expression," he favored that leg." In the course of years the bones of the leg had gradually increased in thickness,and had become curved. About ten years ago he consulted the late Prof. Agnew, who told him that he could do nothing to relieve his slight disability of the limb, and that the affection was incurable. About three years since he consulted me, but I could add nothing to what had been already said, and could suggest no treatment.

In November, 1891, the patient consulted me for a fracture of the body of the left scapula. This resulted from a fall backward, as he was descending from the step of a railroad car, the scapula striking the edge of a projecting board or plank. This fracture healed rapidly and well.

In June, 1892, in jumping from a street car while in motion, and while his hand grasped the railing, he experienced great pain just below the right shoulder, and felt that the arm was broken. He came directly to my office. On examination, I detected crepitus, diagnosticated fracture of the anatomical neck of the humerus, and treated him for that injury. Union took place quickly, and full use of the limb was obtained. The only noticeable feature in this injury was the occurrence of slight pain referred to the outside of the humerus, about the lower portion of the upper third. There was at that time no enlargement of the bone at this locality.

On September 19, 1892, the patient again consulted me, stating that a "lump" had eppeared on the outside of the humerus at its upper part. I examined the arm and found distinct cylindrical enlargement of the humerus, obviously a sarcoma of the bone, and I stated this to the patient, advising him to consent to the removal of the limb at the shoulder-joint, if the diagnosis should be confirmed by a preliminary incision. At the patient's request, Drs. Packard and John Ashhurst saw the case in consultation, and they agreed with me in the propriety of immediate operation, From a careful examination of the patient's entire clinical history, there was no doubt in our mind that the case was one of osteitis deformans, first described by Paget, and which had been followed, as is so often the case, by the development of a malignant growth.

The operation was fixed for October 5, 1892, but at the preliminary shaving of the axilla, and preparation of the limb, or by the patient's lifting of the limb, fracture, which may fairly be regarded as spontaneous and non-traumatic, occurred, as was made evident at the time of operation, done in the presence and with the assistance of Drs. Keen, Ashhurst, Packard, and others.

To prevent hemorrhage, the long steel pins of Prof. Wyeth were inserted by Dr. Keen, the anterior one transfixing the anterior axillary fold in front of the vessels, penetrating the tendon of the pectoralis major muscle, and emerging near the end of the acromion.

The posterior needle pierced the deltoid and emerged just below the acromion. By carrying the needle, especially the anterior one, well upward, the constricting rubber band was placed so high as not to prevent the rotation of the humeral head, or to interfere materially with its disarticulation.

This patient suffered very slight loss of blood at the time of the operation, and received but little shock. He reacted promptly and perfectly, and for several days did well, the wound uniting throughout. On the night between the fifth and sixth day the temperature rose to 104.5°, and a copious eruption, similar to that of measles appeared on the abdomen and chest, and eventually invaded the extremities, and indeed the whole body. There was marked coryza, and the tongue became brown and dry. This condition resisted all treatment and the free use of antipyretics. As the eruption spread the temperature still rose, reaching 107.5° and 108°. and the patient died on the afternoon of the 15th of October the tenth day after the operation. The intellect remained clear until within an hour or so of the end.

I cannot but regard the death as due to some form of septic infection not easy to determine.

It is unnecessary to add that the antisepsis was observed in the treatment before, during, and after the operation.

The specimens, showing the sarcoma of the shaft of the humerus, and the peculiar indented fracture of its head and anatomical neck, are before this Academy. I particularly desire the observation of the Fellows to the fracture, which appears to me to have resulted from violent impact of an infiltrated diseased caput humeri against the edge of the glenoid cavity.

CASE II. AMPUTATION AT SHOULDER JOINT FOR ENCHONDROMA OF HUMERUS —The other case of shoulder amputation, in which I used Wyeth's pins, was that of a

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boy, from Vermont, ten years of age. Nearly a year previously a tumor, apparently an enchondroma, began to develop on the inner side of the humerus, close to the head of the bone. It eventually grew until it attained a diameter of two and a half inches. It was painless, but interfered with the joint-motion by its The boy was brought to the clinic of the Jefferson Hospital and after consultation with my colleagues, I determined to remove the arm at the shoulder.

This was accordingly done on the 28th of November Wyeth's pins being first introduced by my colleague, Professor Keen. The anterior pin was made to emerge three-quarters of an inch above the tip of the acromion As a result the circular turns of the tubing rested on a somewhat higher level than in the preceding case. Perfect freedom of the joint was preserved, and its disarticulation was not unimpeded. Previous section of the bone with the saw, as directed by Professor Wyeth was not necessary. A roller bandage was applied as a compress under the tubing and directly over the artery. Hemorrhage was thus perfectly prevented, and the removal of the limb, as in the former case, was practically a bloodless procedure. This boy recovered without accident.

I may state that in both these instances an Esmarch elastic bandage was applied previous to the insertion of the pins.

Forty-Five Cases of Recovery after Temperatures of 110° F., and Above.

BY CHARLES MILTON BUCHANAN, M.D., WASHINGTON, D. C.

Is high temperature itself necessarily fatal? The belief has long become classic, that no one can withstand a temperature which has ranged as high as 107.6° F. for any appreciable length of time. Moreover, certain French physiologists have claimed that an elevation to 111° for even a few minutes would instantly destroy the leucocytes and that hence, under such conditions the death of the whole organism must necessarily ensue. This is a question of the greatest interest and practical value to every practitioner and the subject of hyperexia has lately been receiving considerable attention at the hands of medical journals. The mechanism and *rationale* of the condition has been so thoroughly discussed that further discussion would prove but wearisome repitition. We have in the present instance little inclination or time for either theory or verbiage. Is high temperature *per se* necessarily fatal? Theoretical physiologists say yes, but the teachings of Nature say very distinctly, not necessarily. This position it is not necessary to uphold by argument; we append a table of forty-five cases of recovery from temperatures ranging from 110° to 157°—probably 171°! The very lowest being 2.4° above the old classic "dead line" of temperature. Sure then we may reasonably conclude that hyperpyrexia is not necessarily though usually fatal—"*dum spiro spero.*" (See Table, next page).

EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

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Some of the Points at Issue in the Contemplated Revision of the Code.

Judging by the report of the Committee on Revision of the Code the main subjects for discussion in this matter at the next meeting of the American Medical Association will be the paragraphs relating to the right of securing patents for mechanical devices and to consultations with irregulars. It seems almost heedless to insist, that for a profession justly priding itself with the most humane and noble aims, the patenting of any process or appliance that is intended for the relief of suffering would be inconsistent and incompatible with such aims, and we confidently expect that the vast majority of the members of the Association will cast their vote in favor of the time honored costume with regard to this question.

Respecting consultation with irregulars it is our conviction that such consultations should be refused. Socially we consider it our duty to associate with irregulars as we would with other honorable members of the human family, professionally we cannot recognize them as long as they will call themselves anything but scientific physicians. If they drop the names eclectic, homeopath, Indian doctor, Christian scientist, etc., and are satisfied with the simple name of physician and prove that they have had a sufficient education in anatomy, physiology, chemistry, pathology, etc., which some no doubt have had, then we might consult with them, no matter if some of them have faith in a few other remedies be-

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Temperature. Degrees.	Diagnosis.	Reported By	Reference.	Remarks.
110	Cerebral rheumatism.	Da Costa.	American Journal Medical Sciences, January, 1875.	
110	Rheumatism.		Lancet, N. Y., 1882, vol. ii, p. 148.	
110	Rheumatic fever.	Wilson Fox.	"Hyperpyrexia," p. 4.	
110	Intermittent fever.	McIntosh.	British Medical Journal December 20, 1879.	
110	Sunstroke.	Ellis.	New York Medical Record August 11, 1888, p. 148.	
110.3	Pleuritis.	Cobb.	Clinique, Chic., February 15, 1892.	During puerperium.
110.4	Rhenmatism.	Arkle.	Med. Press and Circ., Lond., March 29, 1888.	Cold baths very effective.
110.4	"	"	" " " " "	Ice-cold pack effective.
110.4	Malarial fever.	Van Dyke.	Med. Rec., May 9, 1891.	Child fifteen months old
110.5	Sunstroke.	Yale.	N. Y. Med. Jour., November, 1874.	
111	Cerebral meningitis.	Harrhy.	So. Afric. Med. Jour., iii, 42.	One hundred and eleven degrees reached on four different days.
111	Typhoid fever.	Cheadle.	Lancet, 1879, i, p. 327.	
111	" "	Donkin.	" " "	
111	" "	"	" " "	
111	Sunstroke.	Peabody.	N. Y. Med. Rec., February 17, 1886.	
111	Ovaritis.	Tait.	Lancet, 1884, vol. ii, 59.	
111	Ovariotomy.	"	Lancet, 1884, vol. ii, 39.	
111	Hysteria.	Clemow.	Lancet, 1887, vol. ii, 1112.	
111	Spinal injury.	Brodie.	Brit. Med. Jour., December, 20, 1879. Also see Med. and Chir. Trans., 1837.	
111.4		Mac Nab.	Lancet, ii, 1873, 341.	
111.6	Typhoid fever.	Donkin.	Lancet, Lond., May 11, 1878.	
112	Scarlatina.	Church.	Med. World, 1886, 212.	
112	Synovitis.	Donkin.	Op. cit.	
112	Painful stump.	"	" "	
112.8	Pneumonic fever.	Loventzen.	Centralb. f. klin. Med., Leipzig, 1889, x, 569-572.	
113	" "	Donkin.	Op. cit.	
113	Sunstroke.	Parkes.	Chic. Med. Jour. and Ex., 1878, ii, 391.	
113	Hemoptysis.	Loventzen.	Lancet, Lond., 1889, ii, 805.	
113.5	Intermittent fever.	Whitney.	Brooklyn Med. Jour., 1889, 391.	Every third day temperature rose to 108° or 113.5° F.
113.8	" "	Mackenzie.	Brit. Med. Jour., February 13, 1892.	
114	Surgical operation.	Hanna.	Cliniqne, Chicago, 1889.	Three weeks after extirpation of uterus through vagina. No serious symptoms; pulse never above 100!
115	None.	Ormerod.	Lancet, November 9, 1878.	
115	"	"	" " "	
115.8	Rheumatism.	"	Lancet, 1878, ii, 658.	
116	Hysterics.	"	Lancet, November 9, 1878.	
116	Abdominal pain.	Donkin.	Op. cit.	
116	Nephritis.	Kinsman.	Ohio Medical Record, 1881, p. 357.	
117	"	Ormerod.	Op. cit.	
120.8	Abdominal pain.	Mackenzie.	Lancet, London, November 5, 1881.	
125	Spinal injury.	Teale.	Lancet, London, March 6, 1875; Medical Times and Gazette, March 20, 1875.	Temperature 108° to 125° for nearly nine weeks. Pulse never above 120, usually 90 to 100. Respiration never other than normal in frequency though at times excessively feeble.
125.5	Not stated.	Little.	Medical Times and Gazette, 1880.	
128	Phthisis.	Mahomed.	Lancet, New York, 1882, i, p. 35.	
113.6	Not stated.	Little.	" " " p. 79.	
151	Pregnancy; delivery "of over one thousand pieces of bone." Septicemia (?).	Galbraith.	Medical Progress, March 21, 1891.	Temperature of 112°, 125°, 145°, 151°, recorded at various times; nurse claims as high as 171°.
157	Tonsillitis.	Heber Jones.	Memphis Medical Monthly, October, 1861.	Patient, fifteen years of age. Case vouched for by six (6) reputable physicians.

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sides those that have the confidence of scientific men.

On the other hand, should a patient wish the attendance of a physician, who happens to be an eclectic or homeopath, as our successor in the treatment of a case, it would only be human to furnish him (our successor) with a full record of our past management of the case, if he should wish us to do so.

We agree with the Committee on Revision of the Code that all sections describing the obligations of patients to their physicians and of the public to physicians should be omitted.

Concerning the paragraph on consultation with other physicians, we think that a well bred physician needs no instruction by a code to govern his action, yet, while it seems to us so simple what is the duty of physicians towards each other, it has been our experience that there are quite a number of men who have not the slightest idea of what a consultation means. All the consulting physician has to do, in our estimation, is to give his opinion as to his view, and the treatment of the case to the attending physician, and to call again when his services are solicited by the former; instead of this it occasionally happens that the consultant will act as though he had the case in charge. It is also our opinion that any kind of code will never make gentlemen out of those that are not, and it has often been urged that some of the apparently most ardent admirers of the Code are constantly sinning against it. If physicians would only act according to the maxim, "treat others as you would like others to treat you," there would be no need for a Code of Ethics.

Inoculation Against Cholera.

While the etiology of cholera and its method of dissemination is well known at the present time all therapeutics, judging from the reports of European authors, have so far proved powerless. Inoculation with cholera virus has met in Germany with negative results.

Very extensive preventive inoculations are now being made in India by M. Haffkine, of England, in regard to which we find the following in the *British Medical Journal*, May 13, 1893;

M. Haffkine, who left this country for India a short time ago, after spending some time in Calcutta, has joined Mr. Hankin at Agra, where the anticholeraic inoculation is being carried out on a large scale. No fewer than two hundred persons, practically the whole of the British officials and many of the British residents, volunteered to undergo inoculation, so that on the third day after his arrival at Agra M. Haffkine had inoculated fifteen English residents; the next day a number of the native residents also volunteered, and on the seventh day fifty-three English and native residents were inoculated, amongst these being several ladies. As these presumably—for we hear nothing to the contrary—are all doing well, a great step has been made towards allaying any distrust that there may have been on the part of the natives. If, now, some method of cultivating the organism, in which the use of beef broth or other animal products is not involved, can be devised, there can be no reason why this plan of treatment should not be generally accepted by the various classes and castes in India as being at least allowable, and as interfering with no religious principles or caste observances.

The inoculation of European residents alone would be futile, even from the experimental point of view, as, from the experience of Indian medical authorities it would scarcely be necessary as a preventive measure, since the conditions under which the European residents live are distinctly unfavorable to the outbreak of cholera amongst them even when it is raging amongst the natives. At the same time, their action in volunteering to undergo this treatment cannot but inspire confidence amongst those for whom, if the method is of use at all, it should prove serviceable.

As was to be expected, M. Haffkine's method did not at first command itself to a number of those working at preventive medicine in India, some holding that there is nothing particularly new in it, others that the principle is entirely new and not reliable, others, again, insisting that what in it is new is not true, and what is true is not new. It must appear to all unprejudiced observers, however—and especially to those who had the opportunity of seeing M. Haffkine's own experiments, and the very great success that attended them—that accepting the fact that this inoculation appears to give rise to little beyond discomfort, the opportunity to test the method on such a large scale should be made the most of. In the meantime we may wait for the results, and for additional light to be shed by them, in spite of the fact that there is even now a strong feeling in certain quarters that the comma vibrio may not after all be the actual or exciting cause of cholera. This thesis is at present contrary to the weight of evidence. It is true that Dr. Klein, in his experiments on the action of the cultures of various micro-organisms in protecting cholera and against one another, has obtained some striking general results. But even should his conclusions be fully sustained after further investigation, the fact will not be altered that the specific protection afforded by the comma bacillus against the virulent culture of the same bacillus is much more marked than is the general protection afforded by the other bacteria when inoculated as a preventive measure against the action of the cholera bacillus.

In the one case there have been experiments made from which it may be gathered that the inoculation of a modified cholera bacillus protected against sixteen times the lethal dose of the virulent cholera organism, whilst by no other method that has yet been devised has the animal, so far as we know, been protected against more than double the lethal dose. This is indeed what one would expect from the similarity in many respects of the poisonous materials that are elaborated in the protoplasm of a number of these micro-organisms, but so long as there are the slight differences both as regards

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symptoms and pathological conditions set up by them so long must it be assumed that each of these poisons has, in addition to the general features of resemblance, specific and characteristic differences. It may be that M. Haffkine and Mr. Hankin are too sanguine, but under the circumstances we can only admire their enthusiasm, and heartily wish that it may be justified by most brilliant results. The ravages committed by cholera amongst our Indian fellow-subjects are so great that should it be possible to diminish the death-rate by one in ten, the saving to India in life would be simply enormous.

There is one feature in this work which has excited M. Haffkine's admiration and sympathy, and that is that in a place like Agra, two hundred European residents should offer themselves merely as examples (for the danger of taking cholera in their case has been reduced to a minimum) to the native population amongst whom the danger of contracting cholera is so great. It is by such acts as this that the British governing race are enabled to retain the respect and esteem of those amongst whom they work.

Quantitative Determination of the Hydrochloric Acid of the Gastric Juice.

In a very interesting review of the more important methods for the quantitative determination of the hydrochloric acid of the gastric juice, Julius Friedenwald, demonstrator of pathology, College of Physicians and Surgeons, Baltimore, in the New York *Medical Journal*, May 27, 1893, says: Since the chemical examination of the gastric secretion has assumed such importance in the diagnosis and treatment of diseases of the stomach quite a number of new qualitative and quantitative methods have been introduced to determine, with more or less accuracy, the acidity of this secretion. Of the quantitative methods, we must distinctly separate those which are merely approximate in their value and which are intended for mere diagnostic and therapeutic purposes from those which are more scientific in their aims, more difficult to carry out, and from which we expect exact values. An hour after a trial breakfast after the manner of Ewald Boas (thirty-five to seventy grammes of white bread and 300 to 400 c.c. of water) the contents of the stomach are obtained by the aid of a stomach tube and filtered, and after the filtrate has been qualitatively examined and its entire acidity determined by the use of phenolphthalein (ten c. c. of the gastric filtrate is titrated with a one tenth normal sodium hydrate solution—one to two drops of one per cent phenolphthalein solution having been previously added to the filtrate—until a reddish hue is obtained) as an indicator, one of the three following approximate methods may be employed for the quantitative determination of the free hydrochloric acid:

Mintz's Method.—Mintz has tested the phloroglucin-vanillin reagent (phloroglucin, 2; vanillin, 1; absolute alcohol, 30) of Gunzburg, and has determined that its limit of accuracy is 0.0036 per cent of the hydrochloric acid. The examination is thus carried out: To 10 c. c. of gastric filtrate one-tenth normal sodium hydrate (one-tenth normal sodium hydrate solution is one which contains 0.004 gramme NaOH in each cubic centimetre; every cubic centimetre of this solution corresponds exactly to 0.00365 HCl) is added until a reaction can no longer be got by testing with Gunzburg's reagent. (A few drops of this reagent are placed in a small porcelain dish, together with an equal quantity of gastric filtrate, to which the one-tenth normal sodium hydrate has been added, and carefully heated to dryness over a small flame. If free HCl is present, a carmin-red mirror is formed.) If with 1.2 c. c. normal alkali a reaction can be got, but with 1.3 c.c. none, then the quantity of free HCl is 12+1 c.c. one-tenth normal NaOH—that is, the acidity for free HCl is 13, which multiplied by 0.00365=0.0474, the absolute percentage of free hydrochloric acid in 100 c. c. of gastric secretion. This method has been recently tested by Martius and Luttke, and found to give sufficiently reliable but approximate results.

Boas's Method.—A weak watery solution of Congo red is prepared, which is used as an indicator. To 10 c.c. of gastric filtrate sufficient is added until a distinctly blue color is obtained, and then titrated with one-tenth normal NaOH until the original red of the Congo solution is got. If, for instance, 5 c. c. of the one tenth normal NaOH has been used, the percentage of free hydrochloric acid in a hundred grammes of gastric secretion will be $50 \times 0.00365 = 0.18$ per cent. This method gives not only the percentage of free hydrochloric acid but also of free organic acids. However, the very small quantities of organic acids which are usually present in the gastric filtrate after a trial breakfast do not materially vitiate the results; if larger quantities are present, they must first be removed by agitating with ether. I have had frequent occasion to employ this method in Boas's laboratory, and have always found it convenient and satisfactory for practical purposes.

Luttke's Method.—Luttke has recently recommended the use of tropeolin O O as indicator, instead of Congo dissolved in dilute alcohol; the yellowish hue of tropeolin is changed to red by the addition of free acids. This reagent is employed in a manner similar to that given above for Congo.

Among the more scientific methods which may be employed for the determination of hydrochloric acid may be mentioned those of Heyner-Seemann, Sjoqvist, Luttke, and Leo. They are intended for the estimation not only of free HCl, but likewise for that part of the HCl combined with inorganic as well as organic bases, so that they may be employed during any stage of digestion, even before hydrochloric acid has been set free. It must be stated in advance that none of these methods is devoid of certain errors, and that as yet no perfectly accurate ank reliable method is known.

The Heyner-Seemann Method, Also Known as

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Braun's.—If to a certain quantity of gastric filtrate a definite quantity of one-tenth normal NaOH is added, and the whole evaporated to dryness over a water bath and then charred in a flame, the organic material is converted into carbon dioxide, which escapes, so that from the remaining free alkali the percentage of hydrochloric acid is easily calculated. Example: Ten c. c. of gastric filtrate is exactly neutralized with one-tenth NaOH (say, 8 c.c.); it is now evaporated and charred, and the ash dissolved in water, filtered, and exactly the same quantity of one-tenth normal HCl (one-tenth normal HCl is one which contains 0.00365 gramme HCl in each cubic centimetre. Each cubic centimetre of a one-tenth normal acid neutralizes exactly the same quantity of a one tenth normal alkali) is added to the filtrate as normal NaOH was added before (8 c. c.). A few drops of phenolphthalein are added, and the whole titrated with one-tenth normal NaOH; if 3 c. c. would now be required for neutralization, 30 multiplied by 0.00365 would give 0.1095 per cent free HCl. This method is recommended by Leube.

Sjoqvist's Method.—If a gastric filtrate to which barium carbonate has been added is evaporated to dryness, all the acids are changed into barium salts; now, by charring the mass the barium salts of the organic acids are converted into barium carbonate, while the barium chloride remains unchanged; a watery extract is then made; barium carbonate is insoluble in water, while the chloride passes over; the quantity of barium chloride is determined by titration, from which the HCl is calculated. The method is most conveniently carried out according to Bourget's modification, which Boas has still further simplified. Ten c. c. of filtered gastric secretion to which a small quantity of pure pulverized barium carbonate has been added is evaporated in a silver crucible over a water bath to dryness. The mass is then washed in the flame, allowed to cool, and then repeatedly extracted in warm water and filtered until the filtrate reaches 50 c. c. The filtrate now contains the chloride of barium alone, while the carbonate of barium has been left back on the filter. To the filtrate a saturated solution of sodium carbonate is now added; a precipitate of barium carbonate is formed. This is then filtered and washed until the filtrate no longer reacts alkaline. The filter with its contents is then removed, placed in a beaker glass in water, rubbed into pieces, and then sufficient one tenth normal HCl added until all barium carbonate has passed into solution and reacts acid to litmus; after boiling to get rid of all CO_2, a few drops of phenolphthalein are added, and the whole titrated with one-tenth normal NaOH; if 10 c. c. of the normal one-tenth normal HCl has been used and on titration with the one-tenth normal NaOH say 4, then we have 6 c. c. one-tenth normal HCl in every 10 c. c. of the gastric filtrate, or 60 in every hundred, which, multiplied by 0.00365,=0.02190 per cent. Until very recently this method was considered quite accurate, but Kossler has demonstrated that even this method has sources of error. He has shown that by the action of calcium chloride on acid potassium phosphate (and phosphates are always present in a trial breakfast) HCl is set free and escapes according to the following formula: $CaCl_2 + KH_2PO_4 = CaHPO_4 + KCl + HCl$. According to him, an error of from twenty to forty per cent may be made in this way. Martius and Luttke have also for other reasons found this method inaccurate.

Luttke's Method.—This method is a modification of that given by Vulhard for the determination of the chlorides in the urine. When to the gastric contents a strongly acidulated silver-nitrate solution is added in excess, a precipitate of chloride of silver is formed; if the chloride of silver is now filtered and the quantity of uncombined silver determined, the quantity of chlorides can easily be calculated. If, for instance, 20 c. c of one tenth normal $AgNO_3$ solution has been added to 10 c. c. of gastric secretion and after filtration only 10 c. c. of one-tenth normal $AgNO_3$ remains uncombined, then the other 10 c. c. of silver solution must have been used up in combining with the chlorine. The chlorides combined with inorganic bases can be similarly determined after evaporation and charring of the gastric contents; the ash is then extracted with water and the chlorides determined by adding an excess of one-tenth normal silver solution. The determination of the excess of $AgNO_3$ rests upon the following principle: If to a solution of silver nitrate strongly acidulated and containing some ferric sulphate a solution of sulphocyanide of ammonium is added, a precipitate of sulphocyanide of silver is occasioned and a blood-red color is produced when the last of the silver is precipitated. The sulphate of iron thus acts as an indicator and serves to show when all the silver has been precipitated.

(A) Determination of all chlorides: Ten c. c. of well agitated unfiltered gastric secretion are placed in a 100 c. c. flask; 20 c. c. one-tenth normal silver solution (a one-tenth normal silver-nitrate solution is one which contains seventeen grains of $AgNO_3$ to the litre; the indicator ferric sulphate and sulphuric acid must be added) are added; the flask is then well shaken and allowed to stand for ten minutes, and filled up to 100 c. c. with distilled water, agitated, filtered through a dry filter into a dry beaker glass. Fifty c, c. of the filtrate are then titrated with a one-tenth normal sulphocyanide-of-ammonium (a one-tenth normal sulphocyanide of-ammonium solution is one which contains 7·6 grammes $CNSNH_4$ to the litre. For special directions for preparing this solution, as well as the silver solution, see Martius and Luttke, *Die Magensaure des Menschen*, p. 105) solution. The number of cubic centimetres of sulphocyanide solution multiplied by two and subtracted from twenty (the quantity of silver used) gives the entire quantity of chlorides present in one hundred grammes of gastric contents.

(B) Determination of inorganic chlorides: Ten c. c. of well-agitated gastric secretion are evaporated to dryness over a water bath; after evaporation the mass is charred in the direct flame, the charring being kept up until the

ash no longer burns with a bright flame. The ash is then extracted with 100 c. c. of hot water and filtered. The entire filtrate is then placed in a beaker, precipitated with 10 c. c. onetenth silver solution, and titrated with one-tenth snlphocyanide-of-ammonium solution. The calculation of the inorganic chlorides is made by a subtraction of the number of cubic centimetres of sulphocyanide-of-ammonium solution from the number of cubic centimetres of silver solution utilized (10 c. c.). The calculation of hydrochloric acid is made by a subtraction (A—B)—that is, the value obtained for the inorganic chlorides from that of the entire chlorides; this gives the value for HCl in each 10 c. c. of gastric secretion, which, multiplied by 0.0365, gives the per cent of HCl in 100 c. c. of the gastric contents.

Although this method of Luttke's is but a few months old it has not failed to receive severe criticism. Both Ewald and Boas have called attention to the fact that no practical advantage is gained by utilizing unfiltered gastric secretion. Ewald believes that the error which Kossler has found for Sjoqvist's method must also be taken into consideration—namely, that by the evaporation with calcium salts and acid potassium phosphate HCl is set free and escapes (calcium salts and phosphates are always to be found in the gastric contents).

Leo's Method.—This method rests upon the principle that free acids, such as HCl, are fully neutralized by the addition of calcium carbonate even at low temperatures, while solutions of acid phosphates or other salts of sodium or potassium retain their acidity.

To 10 c. c. gastric filtrate 5 c. c. concentrated calcium-chloride solution are added, and a few drops of a solution of alcoholic phenolphthalein and then titrated with a one tenth NaOH solution (A). An additional quantity of gastric filtrate (15 c. c.) is precipitated with about one gramme pure powdered $CaCO_3$, agitated, and then filtered through a dry filter. Ten c. c. of this filtrate are removed and air air passed through (this is best accomplished by passing air through by means of a double-bulbed syringe to one end of which a piece of glass tubing is attached) so as to remove all carbon dioxide. To this 5 c. c. $CaCl_2$ and a few drops of alcoholic phenolphthalein are added, and the acidity determined by titration with one-tenth normal sodium hydrate (B). A—B corresponds to the free acids; if fatty and lactic acids are not present the result would correspond to HCl; should fatty acids or lactic acid be present in the gasrric filtrate they must first be removed —the fatty acids by distillation, the lactic acid by agitation with ether. Of all the scientific methods, Leo's seems the most accurate and is preferred by Kossler and Ewald. It must be remembered that none of the methods known give absolute but merely relative values, and that a perfectly reliable method for the determination of free as well as bound HCl is as yet unknown.

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ABSTRACTS

Some Erroneous Ideas on Ptomaines.—Considerable misconception—not to say fundamental ignorance—is prevalent on the subject of ptomaines (*Brit. Med. Jour.*). This may clearly be seen from letters and articles which have appeared in the press since the recent sardine poisoning case, and also from statements made by medical men under conditions calculated to lend authority to their utterances. A case recently tried in a northern town, and an inquest held only a few miles from the same town, have brought out assertions regarding ptomaines which are almost as erroneous as the announcement in a popular weekly review that "ptomaines are bacteria." As for obvious reasons, the erroneous statements made in connection with this subject are extremely dangerous, since they may lure the public into a feeling of comfortable irresponsibility, it is desirable to point out some of the commoner and, at the same time more dangerous, misconceptions in regard to these poisons.

We hear it stated sometimes that all ptomaines are destroyed by such an amount of heat as is employed in the ordinary process of cooking. This might be so if it were the case that ptomaines were bacteria; but if it were so, cases of food poisoning would be unheard of. Anyone acquainted with Brieger's work and the chemistry of these toxines knows how stable and resistant against heat almost all, and especially the more important, ptomaines are; and that, therefore, there can be no safety in boiling, so far as the destruction of these bodies is concerned. Moreover, in the separation of these substances heat is constantly employed without the slightest effect on their toxic properties. Analogous observations are almost daily made during the preparation of the chemical products from pure cultures of bacteria, where heat is constantly used to destroy the micro-organisms. If there be death in the pot, generally speaking, no amount of boiling will prevent it. Another statement which invites unqualified dissent is that by boiling the poison will be distilled out and so much diluted by the water used as to become inoccuous Most ptomaines—there are exceptions—are very soluble in water, but it is absurd to assume that if hidden in the centre of a piece of the meat they would diffuse through the tissues and be dissolved and diluted. Lastly the fact that of several people who have partaken of a tainted article of food only one has suffered, has been used as an argument against the toxic nature of such food in any particular case. Can anything be more erroneous? The poison may be extremely localized in a particular piece of meat, the rest being free from it; and when we have to deal with a number of fish packed in the same tin, some only may be tainted, as well as shown in the case investigated by Dr. Stevenson, as here, moreover, the boiling oil in which the sardines are placed had not destroyed the lethal substance.

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The prevention of food poisoning is a problem of extreme difficulty. In the meantime, however, we must remain fully alive to all the results of accurate chemical and physiological observations, and not lull ourselves into a feeling of safety while we may be face to face with death, all the more deplorable as it is unforeseen, accidental, but fortunately rare.

The Influence of Diseases of the Ear Upon the Development and Course of Insanity.—The following is an extract by Ireland (*Journal Mental Science*), from a resume of Dr. Bjeljakow (*Boston Med. and Surg. Journal*), who has studied the subject in a hospital of St. Petersburg. He has confined his observations to cases where there was distinct inflammation of the middle ear.

Out of 135 post-mortem examinations which he made during four years, 17.12 per cent suffered from internal otitis. Of these, one of the patients had melancholia, one paronoia hallucinatoria acuta, eight paranoia hallucinatoria chronica, two secondary dementia, three epileptic insanity, four general paralysis, one acute delirium, one senile dementia and three hebephrenia.

The author, at the end of his paper, gives the following conclusions:

1. An infiammatory process of the internal ear is frequently the cause of mental derangement, especially of insanity accompanied by hallucinations.

2. If the local inflammatory process takes an unfavorable course the insanity often passes into secondary dementia, which, otherwise, this form of insanity is not so liable to do.

One-sided hallucinations of hearing are very frequently the result of a heightened excitability of the cortical centers, the result of the transmission of the irritation from the auditory nerves.

3. Hallucinations of hearing on both sides, which support the hypothesis of the independent function of each hemisphere, may be caused through disease of the auditory apparatus.

4. Irritation of the organ of hearing frequently does not stop at exciting hallucinations of hearing, but as a result of the influence of this sense upon the others, it also excites other hallucinations, especially those of taste, smell and general sensibility.

The character of the delusions of the senses is tinged by the personality of the patient.

5. In many of these patients, who suffered from ear disease, there was found a hyperesthesia of hearing which, as a sequel to noises or musical sounds in the ear, becomes changed into a diseased sensation.

At the same time the sensibility to hearing outward sounds is not increased, but, for the most part, diminished.

6. The overflow of saliva, which often accompanies suppuration of the middle ear, is caused by irritation of the chord and the nerves of the tympanic plexus.

The hypochondriac depression and pain about the precardium, which from time to time trouble these patients, may be explained through irritation of the nervi vagi of the auricular branch and the propagation of this irritation to the auditory brain centers.

7. The connection of disease of the ear with insanity accompanied by hallucinations is only observed in cases where mental activity and apprehension are not yet much diminished.

8. Epilepsy seems sometimes to depend upon disease of the labyrinth.

The irritation, coming from inflammation of the middle ear, may assume the form of a false general paralysis.

9. Hallucinations of hearing, though rare in general paralysis, may, when they appear, be the result of otitis on one side. In this case the hallucination is generally confined to the same side of the brain.

Diphtheria Without Membrane.—There has long been reason to believe that diphtheria may exist in the absence of membrane formation (*Medical News*). Thus, it is not uncommon in times of epidemic to encounter, in families of which one member has had diphtheria, cases of simple angina, of which the true nature is made evident by the transference to others of virulent diphtheric infection. At times, too, nephritis and the palsy characteristic of diphtheria have been observed in the sequence of an attack of apparently simple catarrhal angina. It has, also, occasionally happened that if two persons who have cleared by suction a tracheotomy-canula used in a case of croup, one has developed typical diphtheria, while the other suffered only from an ordinary febrile angina. Of course, it is possible that in all of these various instances, membrane has been present, but has disappeared, or is present but situated out of the range of observation. The confirmation of the natural inferences from the circumstantial evidence remained incomplete and inconclusive until the discovery of the bacillus of diphtheria by Loeffler, and the demonstration of its etiologic relation.

It has been shown, beyond peradventure of doubt, that many cases of croup are of diphtheric origin; while in the angina of scarlatina, and in most cases of simple and lacunar and follicular angina, as well as in many cases that cannot clinically be distinguished from cases of diphtheria of the pharynx and air-passages and from genuine croup, diphtheria bacilli cannot be found. The bacillus of diphtheria has but rarely been found in the oral cavity of perfectly healthy individuals, and of persons suffering with catarrhal agina.

Feer (*Corresp.-blatt f. Schweizer Aerzte*) has recorded the results of an interesting study that have an important bearing in this connection. His study includes forty cases of bacillary diphtheria, five cases of membranous angina dependent upon the presence of micrococci, and numerous cases of simple and follicular angina. He reports in detail a house-epidemic, in which, in the course of two months, there occurred in the Children's Hospital at Basle, at a time when diphtheria was not especially prevalent in the city, eight cases in which

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membrane formed in the larynx or pharynx, or in both. In six of these diphtheria-bacilli were found; in the remaining two only micrococci. Of the former, four died; all of the others recovered. In the further course of events, virulent diphtheria bacilli, in the total absence of deposit, were found upon the tonsils of three children that occupied a room that had previously been occupied by three other children suffering from genuine diphtheria. Two of the children displayed manifestations of febrile catarrhal angina, with enlargement of the cervical glands. One presented neither local nor constitutional manifestations.

These observations indicate that we have yet considerable to learn concerning the clinical recognition of diphtheria, while their practical outcome leads to the treatment of mild and doubtful cases in times of epidemic on the same lines as that of the most virulent.

Heart Hypertrophy.—Dr. William T. Howard, in the *Johns Hopkins Hospital Reports*, analyzes 105 cases of heart hypertrophy from the records of the Johns Hopkins Hospital.

He adopts for comparison as the standard of normal heart weighs 230 grammes for men and 260 for women, and believes that clinically the size of the heart can be determined with fair exactness. Percussion gives in the main the best results.

Twenty-nine per cent of the 360 autopsies showed 105 well-marked cases of heart hypertrophy.

The following table gives the relative frequency of the conditions producing it:

	PER CENT.
Arterio-sclerosis	59.
Nephritis	13.4
Valvular lesions	12.4
Adherent pericardium	7.6
Work	3.8
Tumors	1.9
Aneurism of heart wall	0 95
Hemic plethora	0.95
Total	100.00

These records throw a new light upon the frequency of arterio-sclerosis. After the age of thirty years this is by far the most frequent of the cardio-vascular diseases. It would be erroneous to claim that this great relative frequency of the occurrence of arterio-sclerosis obtained for all countries or even for all portions of this country. But these tables do show with startling clearness that arterio-sclerosis is a very much more common disease than is generally supposed. Of the 59 cases of heart atrophy in the whole list, of 40 years of age and over, 48 cases or 81 per cent are due to arterio-sclerosis.

In mechanical obstruction to the circulation, heart hypertrophy is a condition very much to be desired. And the amount of hypertrophy present, if the individual is in fair health, may be taken as an index of the gravity of the lesion or lesions causing it. Just as the height of the body temperature in acute infective diseases may be regarded as a criterion of the degree of refraction which the body is exhibiting to the poison.

Treatment of Chronic Valvular Disease of the Heart.—Dr. James Tyson (*Therapeutic Gazzette*) discusses the various heart tonics used in the treatment of chronic valvular disease of the heart.

Digitalis is a remedy always better intermitted to obtain its best effects. He believes that the greater apparent efficiency of the infusion is partly due to the fact that it is generally given in larger doses. One half an ounce is not an infrequent dose of the infusion. This represents nearly three grains of the powder, or twenty minims of the tincture.

Of remedies which may be substituted for digitalis, strophanthus should, perhaps be first mentioned, not that it is always the best. Dr. Tyson has used it in doses of ten minims or twenty drops every two hours for forty-eight hours, without interruption and with good results. It is undoubtedly better borne by the stomach than digitalis.

Caffeine is an admirable heart tonic in mitral regurgitation. One should not give less than three grains at a dose, seldom more, every three hours. When caffeine has been given in full doses for some time it produces mental symptoms quite characteristic, consisting in hallucinations. They, however, cease immediately when the drug is discontinued. Another effect of caffeine which sometimes interferes with its usefulness is its effect in inducing insomnia.

Sparteine sulphate, the author values very highly, especially where a diuretic effect is desired. The dose to rely upon is never less than one-fourth of a grain, increased to one-half of a grain, three, four, and five times a day.

Iodide of Potassium in Fibrinous Pneumonia and Epidemic Cerebro-Spinal Meningitis.—Valtan, of Sandau (*Sem. Med.*; *Brit. Med. Jour.*), states that a large dose of iodide of potassiam, administered in pneumonia in the first six to eleven hours following the initial rigor, brings about rapidly—often in twelve hours—a crysis or lysis of the fever. The smallest dose necessary to bring about this effect is about six grammes, and this ought to be taken once, twice or several times in the course of some hours. This dose is usually well borne. The local phenomena, however, persist, and take the same time to disappear as in cases of pneumonia which have not been treated with iodide of potassium. The general duration of the disease is not shortened by the drug, but the crisis that it brings about removes the dangers of cardiac collapse, which occurs most frequently from the sixth to the eigth day, and so diminishes the mortality of fibrinous pneumonia. Iodide of potassinm may be useful even when administered later, from the first eleven to twenty-four hours of the disease. Under these conditions the temperature is also reduced to normal; it gen-

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erally rises again, however, the next day, and a second dose of six grammes is necessary definitely to arrest the fever. After the first twenty-four hours no favorable effect can be obtained from the potassium iodide. In eighty cases of epidemic cerebro-spinal meningitis Valtan also obtained excellent results from potassium iodide, which acted as a veritable specific. In doses of 3 to 6 grammes, administered once or several times during the day, it rapidly brought about, often the next day, a complete cure of the affection.

Carbolic Acid in Septicemia.—Dr. Wiglesworth (*Brit. Med. Jour.*), expresses a lively faith in the efficacy of carbolic acid in zymotic diseases, given internally. He claims that if given in doses of 4 or 5 grains every two hours in the initial stage of puerperal septicemia, it generally stamps it out in from 24 to 36 hours. In the latter stages of that disease, combined with alternate doses of quinine, it is most effectual. In cases of apprehended puerperal septicemia he commences its administration within 12 hours of completed labor, with great success. His idea is to "carbolize" the patient, by giving a dose every two hours, night and day. When the urine has been rendered black by its administration, and kept so, the object is attained, for the urine thus altered may often be kept for weeks without decomposition taking place. This change in the color of the urine is not due to the presence of blood, for repeated examinations failed to detect a trace of blood even after the largest doses had been administered. The coloring matter has been found to be hydrochinon.

The Etiology of Prostatic Hypertrophy.—Dr. G. Frank Lydston, in the *Medical and Surgical Reporter*, says that the prostate, while it partakes of some of the peculiarities of an involuntary muscular structure, is anatomically and functionally a gland of a peculiarly sexual character. The participation of the prostate in the urinary function is secondary, and is a sequence of pathological conditions.

Granted the sexual and glandular function of the prostate, it is in the direction of the perturberation of this sexual and glandular function that we must look for an explanation of hypertrophy of the organ, or, in short, for all pathological distnrbances which are not the direct result of traumatism or infection.

Hypertrophy of the prostate is, in all probability, due to overstrain of the organ during the period of its greatest sexual activity. This overstrain produces active congestion or hyperemia and glandular proliferation which, if it persists for a long time, is not followed by restoration to the normal condition, but by permanent hypertrophy.

Departure from the normal prostate comes on earlier in life than is usually supposed, a large number of individuals being affected.

In the majority of instances, prostatic hypertrophy is attributed to senile change, simply because the secondary results of enlargement do not manifest themselves until the patient is well along in years. It is conceivable that, although more or less prostatic obstruction may exist before middle age, residual urine may not accumulate in any great quantity until after the bladder walls themselves have begun to lose their elasticity by virtue of the physiological changes incidental to increasing age. Even admitting that residual urine has formed in considerable amount, there may be very little resulting disturbance until such time as germs penetrate the bladder and set up decomposition.

Senility, gout, rheumatism and general atheroma are in all probability, not the exciting causes of prostatic hypertrophy, but are determining factors in so far as they promote irritability of tissue, a tendency to connective tissue proliferation and a loss of elasticity of tissue.

In a perfectly normal old age, it is probable that the prostatic should atrophy. That it does not do so more frequently is explained by the prolonged duration of the sexual function in the human species, incidental to the developmental effect of over indulgence and other causes of sexual over-stimulation.

It will be found by careful rectal examinations of men from the age of twenty upward, that a prostate which is perfectly normal in size, consistency and sensibility, is the exception rather than the rule.

That this aberration of the prostate is followed, in the majority of cases, by a return to a perfectly normal condition is highly improbable in the face of the fact that the majority of patients so lead lives which are so unphysiological from a sexual and dietary standpoint, that the condition of the prostate is more likely to become aggravated than improved.

There are certain cases of so-called prostatic hypertrophy of a circumscribed character, which should properly be termed fibro myomata of the prostate, and in which the etiology is very obscure.

The Diagnosis Between Tubercular and Non-Tubercular Pus.—E. Debraye and E. Legrain (*Rev. Med. de L'Est.*,) have conducted experiments to determine whether tubercular and non-tubercular pus might be easily differentiated by chemical reaction. They conclude that pus containing only tubercle bacilli, and which has not been contaminated with ordinary pyogenic organisms, gives when diluted in the proportion of two or three drops of pus to two or three c.c.'s of distilled water, to which a small piece of caustic soda or potash has been added, the violet color due to albumins on the addition, drop by drop, of an almost colorless solution of sulphate of copper. Pus from an ordinary abscess, on the other hand, when treated in the same way, presents the rose color characteristic of peptones. One is not entitled, however, to absolutely exclude tuberculosis by the peptone reaction, since pus microbes invading softening tubercular foci peptonize the products, and the violet coloration is lost.

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CORRESPONDENCE

A Query.

Editor MEDICAL REVIEW.—I am a subscriber to, and regular reader of your valuable journal. As such, I take the liberty of asking one or two questions, trusting you will answer them through the REVIEW, viz.:

What do you think of a druggist who, when a prescription is presented him by the patient of an M.D., would hand it to another M.D., and that in the presence of the patient, and ask him what he thought of it?

And then for the said M.D. to pretend to (or, maybe, to the best of his ability), look at it, and then tell the patient it would kill him sure if he took it?

The patient saw the purport and meaning of the whole thing, and said to the M.D., "you have been trying for the last two years to kill or cure me and havn't done it, so if this kills, let her kill." Of the above occurrence the writer was informed by several gentlemen to whom he had told it; he also stated to them, he had paid the said M.D. and others about $40 to do what the medicine prescribed did for fifty cents, *i. e.*, cure. Was the action on the part of either professional? If so, please inform. INVESTIGATOR.

[The action of druggist and physician is, of course, below all crotique. Treating people of that stamp with silent contempt they will usually succeed in digging their own grave by keeping up that kind of conduct toward their colleagues.—ED.]

Duboisine in the Treatment of Hystero-Epileptic Couvulsions.—Quinine and more recently antipyrine have been recommended in the treatment of the convulsions of hystero-epilepsy. Dr. P. Albertoni, professor of physiology at the medical faculty of Bologna (*Med. Week*), now advocates the use of hypodermic injections of half a milligramme (grain $^1/_{136}$) of sulphate of duboisine in the treatment of the same affection. He has employed these injections with success in three cases. In the first of these the administration of morphine and atropine had produced no effect on the convulsions, which were very violent. They, however, disappeared after two injections of duboisine, and since that time, a period of five months, the patient has only had two more attacks, which coincided with the menstrual epoch and readily subsided under the administration of a single injection of duboisine. The other phenomena of hystero epilepsy, however, remained unaffected. In the second patient the convulsions also rapidly disappeared after a few injections. The same result was obtained in the case of the third patient, but here the administration of duboisine was apparently followed by an exaggeration of the cardiac palpitations from which the patient had suffered previous to the application of the treatment.

MEDICAL SOCIETIES

Eczema.—Dr. M. H. Mathews (Richmond Academy of Medicine and Surgery May 23, 1893) looked upon eczema as a non contagious inflammatory disease of the skin of constitutional origin acute, subacute and chronic in character. Manifesting any or all of the results of inflammation at once or in succession accompanied by pinching, burning and itching. Later having a serous exudate which dries into scales and crusts with a tendency to infiltrate and thicken the skin which often cracks producing painful fissures. He thought it no longer regarded as a vesicular eruption, but a true inflammation of the skin, of a polymorphous nature; often changing from one form of primary lesion to another and developing these simultaneously in different locations on same patient. There are five elements of importance to be remembered in order to get rid of the confusion of terms.

First stage of eruption, embracing acute, subacute and chronic eczema.

Second stage. The lesion present, as eczemaerythematosum, papulosum, vesiculosum and pustulosum primarily; eczema madidans, squamosum, sclerosum and fissum secondarily.

Third stage. Location of the eruption, whether local or general, and on what part of body, if local.

Fourth Stage. Condition of diseased area, moist, exuding or weeping, scaly or fissured.

Fifth stage. Cause, internal or external.

He thought Pye Smith very clear on the Pathological anatomy when he said, if a section of eczematous skin be made, the cuticle will be found unaffected, the malpighian layer swollen, the papillæ prominent and œdematous with dilated blood vessels and multitudes of leucocytes clustered around them, the deeper layer of cutis and subcutaneous tissues are unaffected."

The prime factor then is nerve and capillary disturbance or dilatation and congestion of superficial vessels, while the changes in the skin are due to amount and grade of inflammation and whether general or localized.

SYMPTOMS. 1. Itching, burning or pricking pain.
2. Redness from congestion.
3. Papules, vesicles, pustules etc.
4. Infiltration or thickening.
5. Fissures or cracks.

The most prominent of these however is itching. Redness is an essential element of eruption and is generally accompanied by rise of temperature in parts affected.

The exudate from eczema, being composed of a saline and albuminous portion, of course tends to dry into crusts and scales. The scales often being the only signs of the disease.

Infiltration or thickening is seen more or less in every case, but belongs more properly as a symptom of

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chronic eczema. The skin becoming hard and leathery as seen in the hands and feet.

The doctor thought eczema due to both a constitutional and local cause, the constitutional cause not yet definitely known but ably supported by Piffard, who says, eczema depends upon a constitutianal derangement or diathesis, hereditary or acquired and of indefinite duration, also that it is the retention of some material in the system that aught normally be thrown off by the kidneys, i. e., uric and oxalic acids with probably other less known products of imperfect oxidization. Liver troubles as well as malaria have been held by some as causes. Amongst local causes he mentioned vegetable and animal parasites, irritant particles of dust and dirt from certain occupations, undue exposure to heat and cold, mechanical agents, in short any external irritant whether mechanical, chemical or thermal. He thought the diagnosis very difficult, especially when it simulated the zymotic diseases; but believed a proper recognition of the beginning and progress of any form would usually lead to a proper diagnosis. To differentiate it from syphilitic eruptions is more difficult. The history of the case, constitutional symtoms, glandular involvement etc. generally clears up the doubt.

The treatment he discussed very fully,following more generally in the line of cleanliness and general hygiene relieving the intense itching, aborting if possible the exciting diathesis, relieving all co-existing derangement such as malaria, dyspepsia, gout, etc. In acute and subacute forms let skin rest, but in chronic, use massage. Regulate diet (specially of children) giving arsenic, calx-sulphurata, benzoat-lithia et ferrum and as water is irritant in most cases it is well to add a little common salt or sodii bicarb. and glycerine, these to be followed by some soft powder, every variety however must be treated according to its simplicity or gravity, some requiring soft lotions i.e. Lotio Calaminæ et Ceratæ or lotio calaminæ et glycerinæ, or those containing tar-Bismuth or zinc oxid, others requiring soothing stimulant astringents i. e., ʒj to ʒj. Plumbi acetat, quiniæ, cantharides etc. He mentioned most of the popular remedies and their application in the several forms, but thought every case called for special attention as there is no specific. Dr. I.J. Moore referred to Dr. Mathews paper in very complimentary terms and then added some observations on eczema in children. He had seen it often in these cases dissappear promptly by regulating diet hence he thought most cases in very young children caused by over-feeding the so called "pastry children". He usually treated them by regulating diet and giving syr. iodid. et ferri. In adults he generally looked after heart, bowels, kidney or liver trouble in eczemas. Dr. Jno. F. Woodward thought Dr. Mathews had neglected one very important point in differentiating eczema from syphilitic eruption that in syphilis the stages of eruption never supplant each other, that is, the erythema never follows the papular, nor the papular the pustular etc., they do not exchange, though the papular may be the first manifestation, the erythema does not follow it etc.

He also referred to two cases of nervous variety, one in a lady at menopause when medication did no good, but the suppression of menses was followed by a rapid disappearance of the eczema. The other case one of a sudden furor of onset at childbirth with no previous symptoms, it was of papular variety and disappeared after lying-in month without treatment. He coasidered both cases of nervous variety consequent upon the nervous excitement at the critical periods of menopause and labor.

Dr. Jas. N. Ellis said Unna defines eczema as a chronic parasitic catarrh of the skin and, while he was not prepared to admit that all eczemas are parasitic in origin, the success attending the local use of parasiticides in the treatment of some of its forms inclined him to believe that they may be due to a vegetable parasite. This seemed to him highly probable in what Dr. Matheus called "Eczema Capitis", a seborrhoic eczema of the scalp beginning as a desquamative erythema and developing into a moist squamous crusted or psoriasis like exanthema readily amenable to antiseptics. The local applicatiou of a 1,5000 bichloride,after cleansing the scalp with a warm sol. of sodii bicarb. had rarely failed to promptly cure cases coming under his observation.

Dr. M. D. Hoge spoke of the treatment of several cases of eczema of scalp by poulticing head for 24 or 48 hours and then using dilute ash-drip or lye.

Dr.J. S. Melford referred to the close connection with, or exciting cause of, several cases as seen by him, of a gouty diathesis and thought in many cases this was the prime factor in bringing about eczema.

Pan-American Medical Congress.—The following is the full text of the report of the committee on permanent organization of the Pan American Medical Congress to the American Medical Association, in session at Milwaukee, Wis., June 6, 1893.

Your committee appointed at Washington to effect a permanent organization of an intercontinental American medical congress, begs leave to submit its final report as follows:

An organization has been effected under the style and title of the Pan American Medical Congress, to be held at the City of Washington, D. C., September the 5th, 6th, 7th and 8th, A. D. 1893, under the Presidency of Prof. Wm. Pepper, M. D., LL. D., of Philadelphia. The details of the organization are set forth in the published preliminary announcement of the Congress, copies of which are respectfully submitted herewith, in both English and Spanish, as a part of this report.

Since the publication of this preliminary announcement an organization has been effected in Paraguay. Your committee is therefore pleased to state that an organization of the Pan American Medical Congress exists in every State and Territory of the United States, and

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in every remaining country and colony of the Americas including the West Indies and Hawaii.

A provision has been adopted since the foregoing publication whereby every medical society, national, colonial and local, has been made a constituent organization of the Congress.

The committee begs leave to report further that the organization which has been effected as above and which, by the authority you have conferred upon it, has been and is already very actively engaged in carrying out the practical ends of the Congress.

The Senate and House of Representatives at the first session of the last Congress adopted a joint resolution, authorizing the President to extend an invitation to the Governments of the Western Hemisphere to send official delegates to the meeting, and to appoint similar delegates on behalf of our own Government. This official invitation has been issued through the Department of State and all replies so far received have been in the nature of acceptances. The President has indicated that the Government of the United States will be represented at the Congress by six delegates. At the last meeting of the Executive Committee of the Congress a resolution was adopted directing that in view af the Columbian Exercises in progress in America this year, aud in view of the relations which have become intimate between the United States and Spain, that the Government of the latter country be requested to send delegates to the Congress. It was thought that the exceptional relations of amity between the two countries would warrant a course which has been avoided with regard to all other European countries out of deference to the interests of the International Congress which is to meet in Rome.

Nhe Nationul Congress at its last session appropriated fifteen thousand dollars ($15,000) for the purposes of entertainment of the meeting.

The President of the United States has consented to open the Congress in person and to extend the courtesy of a reception at the White House to delegates and their families.

A special feature of the Congress will be the proceedings of the sections on Hygiene, Climatology and Demography and on Marine Hygiene and Quarantine. The proceedings of these sections will be largely of the nature of a sanitary conference with particular reference to practical questions of public health and of imminent importance.

With this object in view, every municipality of the three Americas, including the West Indies and Hawaii, has been invited to send an official delegate, and a very large number of acceptances have already been received

The titles of several hundred papers, accompanied in many instances with abstracts, have already been received from representative medical writers in the English, Latin, French and Portuguese countries. This of itself, assures the scientific success of the Congress.

Invitations have been extended to representative European scientists to be the guests of the Congress and a number of acceptances have been received.

In conclusion, your committee begs leave to express its appreciation of the spontaneous response to its appeal for funds in the form of advance registration fees from the public-spirited representatives of our profession in America. Let it be remembered, no registration fees will be accepted from members of the Congress residing outside the United States. Although money has been realized from advance registrations in amount sufficient to pay some of the preliminary expense of organization, a still larger sum is needed with which to meet accumulated obligations.

It should be held in mind that the Congressional appropriation, meager as it is, will be available only for purposes of entertainment at the time of the meeting, and that the expense involved ih publication, correspondence and clerical work is necessarily very heavy and must be met at once. The members of the profession are therefore again urgently requested to register at once by paying the fee ($10) to the treasurer, Dr. A. M. Owen, Evansville, Ind. Those who thus become members of the Congress but who may be prevented from attending the meeting will receive a set of the transactions, which, of themselves, promise to be worth more than the amount of the registration fee.

In submitting this, its final report, your committee begs leave to thank the Association and its executive officers for cordial support, and the medical press for its energetic and efficient aid in promoting this earnest movement for the unification of the medical profession of all the Americas. Respectfully submitted on behalf of the committee,

CHARLES A. L. REED, Chairman.

Operations upon the Uterine Appendages with a View to Preserving their Functions. of Menstruation and Ovulation.—Dr. W. M Polk, of New York, read a paper before the American Gynecological Society in which he drew the following conclusions:

1. In cases of chronic disease of the appendages the incisions should be in the nature of "exploratory incisions."

2. The question of removal should be in the main left for determination after the organs have been exposed.

3. That the condition of the ovary should be the chief factor in determining the question of procedure.

4. That, if need be, this may be determined by exploratory incision of the ovary or puncture.

5. That if the ovary contains pus, it and the associated tube should be removed, it being the rule that whenever an ovary is removed the tube must accompany it.

6. That if the tube contains pus, the ovary being free from pns or disseminated cystic degeneration, the operator is at liberty to recommend either the removal of both organs or else the partial amputation of the tube, leaving the ovary; and that the

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same rule apply in cases of hydro-salpinx and hemato-salpinx.

6. That cysts of the ovary do not indicate removal, provided they are not general throughout the organ and can be enucleated—hematoma of the ovary a possible exception.

8. Tubes with open infundibula, even though adherent and affected with parenchymatous inflammation and endosalpingitis, do not demand removal, excepting when one opens into a pus-cavity.

9. A tube whose outer end is closed may be opened, cleansed, and its inner and outer coats coaptated, and then be returned to the abdominal cavity, provided it does not contain pus and possibly old blood.

10. Adhesions do not demand the removal of the tubes and ovaries, unless they be so dense that in breaking them up the appendages are seriously injured. This presupposes that the appendages in themselves are not sufficiently diseased to demand removal.

The histories of a few of eighty-four cases operated upon with a view to preserving the function of menstruation and ovulation were read, and the fact that these functions had been preserved was fully proven by the occurrence of pregnancy in some.

Clinical Report of Pyosalpinx Treated by Uterine Drainage, with Subsequent Conception.—Dr. Robert A. Murray, of New York, read a paper before the American Gynecological Society on this subject. It having been taught so recently that whenever a tube contained pus it should always be removed, the title of his paper might sound strangely. The author related only six cases because their histories were full and definite, but others about equally convincing to himself had occurred in his practice. He was somewhat surprised that more like cases had not been published, as it was his belief that not infrequently pus tubes recovered by escape of the pus into the uterus. The cases of this nature of which he read the histories were six in number, in three the pyosalpinx having been of gonorrheal origin, in three of puerperal origin. A sufficient proof of recovery was the disappearance after treatment of the swelling located in the tube and the occurrenc of pregnancy, the author attending the patients in more than one confinement in some instances. In all the cases reported the history of gonorrheal or puerperal pyosalpinx was clear, and the diagnosis of the location of the swelling and of its nature was demonstrated by seeing the pus come from the uterus when the tube was pressed upon, other physicians being witnesses to this phenomenon as well as himself. The treatment had consisted of thorough curettement of the uterus for endometritis, washing it out, application of carbolic acid, and drainage. The class of cases of pyosalpinx which offered a fair chance of recovery by this means, without the necessity for removing the appendages, were those in which the tubes were on a level with the uterus, movable, patent, and those in which, if lower down, they could be lifted up. Where there were adhesions and the tubes were blocked recovery would be prevented by interference with drainage into the uterus.

The president said that if the author's experience were corroborated by cases in the practice of other gentlemen, this was one of the most important papers read before the society.

In its discussion Dr. Johnstone related a case in which he witnessed droinage of hematosalpinx into the uterus, and Dr. Edebohls had had some experience like Dr. Murray's, and did not doubt that pyosalpinx did sometimes recover by drainage through the uterus and the treatment of endometritis. Dr. Noule expressed doubt. Dr. Gordon spoke of treatment of endometritis, practising dilatation alone for drainage, not introducing gauze or a tube.

Practical Points in Dress Reform.—Dr. Robert L. Dickinson, of Brooklyn read a paper before the American Gynecological Society, which was illustrated by diagrams, calling attention to certain practical points in the reform of dress of women, and referring more briefly to the physiological and other reasons for such reform. It was only neeessary in a meeting of physicians to merely mention the interference of the corset bands, and overlapping of the several articles of wearing apparel with abdominal respiration, physiological development, and graceful motion. One could hardly hope during fashion's reign for the sudden general adoption of radical reforms, yet it was the duty of physicians to do what they could to induce girls and women to discard harmful modes of dress. The proctical points which he had to suggest permitted, as far as was consistent with physiological laws, of so dressing as not to appear odd. Five illustrations were given, four showing essential articles of wearing apparel. The first was the undergarment, fitting closely, made of one piece, extending from neck to ankles; the second, only for use on going out in the winter, consisting of heavy knit goods, closely fitting, drawn on up to the waist, retaining its place by its elasticity; the third was a skirt and waist in one piece, made of stiff muslin, hanging by broad bands from the shoulders, and intended to protect the dress from the underwear and to prevent exposure of the limbs; the fourth was the dress itself, which also consisted of one piece, and hung from the shoulders; the fifth article was not an essential, but was added to conform to fashion's demands, being a kind of sacque.

Dr. King and Dr. E. C. Dudley made a few remarks upon the subject, warmly approving the object of the paper, to effect a reform in woman's dress, and on motion of Dr. Dudley a vote of thanks was tendered the author.

American Medical Editors' Association.—The annual meeting of this Association was held in Milwaukee on Monday, June 5th, under the presidency of Dr. Culbertson, editor of the *Journal of the American Medical Association*. The president's address was on Medical Journalism. The speaker compared medi-

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cal journals to post-graduate medical schools, as educators of practitioners. He dwelt at some length upon the question of advertisements, and said that no medical journal could live without advertising patronage. He did not approve of the advertising agent, but thought it would be better for advertisers to deal directly with the business management of the journal. In the discussion that followed the address, Dr. Wyle referred to journals published by drug hooses, and thought that they were of no service to the profession. Dr. Hughes suggested that book reviews should be paid for as ordinary advertisements. Dr. Kauffman spoke of reading notices, and held that advertisers were entitled to receive the benefit of them.—The annual dinner of the Association took place in the evening, and at its conclusion, Mr. Ernest Hart, editor of the *British Medical Journal*, delivered an address. The medical editor he said, should be sympathetic and magnanimous, yet should have a capacity for righteous indignation when occasion required. He should be rapid of initiative and prompt in decision. He should avoid the cultivation of a peculiar style, but should always be clear and grammatical in expression. He must necessarily be the subject of much criticism and could hardly avoid making enemies, but his care should be to incur no man's just hatred. Dr. Gould, of the *Medical News*, read a paper on medical orthography, in which he advocated the simplification of the spelling of many words by avoiding the use of diphthongs. The stupidest thing in the world, he said, is the conservatism that refuses all change, good or bad, simply from an unreasoning desire to maintain things as they are. The election of officers resulted in the choice of Dr. Hughes, of St. Louis, for president, and of Dr. Gould, of Philadelphia, for secretary.

American Medical Association.—The following officers of sections were elected at the Milwaukee meeting:

Laryngology and Otology.—Chairman, E. Fletcher Ingals, Chicago; Secretary, J. E. Fulton, St. Paul; Executive Committee, E. F. Ingals, Chicago; C. H. Burnett, Philadelphia; E. L. Shurley, Detroit.

Diseases of Children.—Chairman, W. S. Christopher, Chicago; Vice-Chairman, F. A. Churchill, Chicago; Secretary, F. S. Harsons, Northampton, Mass.; Executive Committee, William P. Watson, Jersey City; E. F. Brush, Mt. Vernon, N. Y.; C. G. Jennings, Detroit.

Dermatology and Syphilography.—Chairman, A. H. Ohmann-Dumesnil, St. Louis; Secretary, Louis F. Frank, Milwaukee; Executive Committee, A. Ravogli, Cincinnati; L. D. Bulkley, New York; L. A. Duhring, Philadelphia.

Ophthalmology.—Chairman, A. R. Baker, Cleveland; Vice-Chairman, Secretary L. H. Taylor, Wilkesbarre.

Oral and Dental Surgery.—Chairman, M. H. Fletcher, Cincinnati; Secretary, Eugene S. Talbot, Chicago; Executive Committee, S. Taft, A. E. Baldwin, Cincinnati; John S. Marshall, Chicago.

Neurology and Medical Jurisprudence.—Chairman, J. G. Kiernan, Chicago; Vice-Chairman, S. C. Gray, New York; Secretary, F. P. Norbury, Jacksonville, Ill.; Executive Committee, O. E. Everts, Cincinnati; H. N. Moyer, Chicago; C. K. Mills, Philadelphia.

Surgery.—Chairman, John B. Roberts, Philadelphia; Vice-Chairman, J. D. Griffiths, Kansas City; Secretary, F. W. McRae, Atlanta.

Practice of Medicine.—Chairman, H. A. Hare, Philadelphia; Secretary, W. H. Washburn, Milwaukee; Executive Committee, I. E. Atkinson, Philadelphia; N. S. Davis, Chicago; Charles G. Stockton, Buffalo.

Obstetrics and Diseases of Women.—Chairman, Joseph Eastman, Indianapolis; Secretary, George I. McKellvay, Philadelphia; Executive Committee, E. E. Montgomery, Philadelphia; J. Tabor Johnson, Washington, D. C.; J. Milton Duff, Pittsburg.

Pan-American Medical Congress.—The section on General Suagery extends a cordial invitation to all medical gentlemen engaged in the practice of surgery, as teachers or practitioners in any of its branches to participate in all its meetings, and contribute papers for the general information. Such papers should conform to the requirements, as set forth in the general regulations of the Congress. In view of the wide extent of the constituency of the Congress, and the varied human environment necessarily under observation, it is suggested that the topic of endemic or surgical diseases prevalent in each country might fittingly receive a large share of attention from the members of this section; but carefully written papers upon any topic connected with surgical bacteriology, surgical pathology or operative surgery of the regions, will be welcomed by the section. John B. Hamilton, M.D., executive president, Chicago, Ill.; John Ransohoff, M.D., English-speaking secretary, Cincinnati, O.; W. H. Heath, M.D., Spanish-speaking secretary, Buffalo, N. Y.

Total Extirpation of the Uterus.—Dr. Herzfeld's new method of extirpating the uterus, analagous to the sacral operation of Teraske-Hochenegg, is as follows (*La Medicine Moderne*): After a median incision in the sacral region near the anus, laying bare the coccyx, which is sometimes removed with the last sacral vertebra, open the peritoneum between the rectum and vagina. The uterus should then be withdrawn. To prevent infection, the operator may close the peritoneum by suturing its rectal border at the site of the original incision to its vesical border as it is reflected from the uterus Hochenegg, however, attaches little importance to this precaution. The extirpation of the uterus takes place outside the peritoneum. Four out of six cases of this operation resulted in recovery, one patient dying of cachexia, and the other of an abscess caused by a pyosalpinx. This method is indicated when the uterus is very large, when the body of the organ has become diseased, and when the cancer has invaded the vagina or parametrium. Hochenegg operated in 22 cases, with 18 cures and 4 deaths, and claims priority in the sacral method.

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NOTES AND ITEMS

Graduates in France.—During the past year there were six hundred and thirty-five graduates of medicine in France, as against over four thousand in the United States.

The Association of Military Surgeons of the National Guard of the United States will hold its third annual meeting at Chicago, August 8, 9, and 10, 1893, under the presidency of Dr. N. Senn.

A Life of the Late Sir Morell McKenzie has recently been written by Rev. Mr. Haweis. Just before its publication the family tried to suppress it, at the instance, it is supposed, of Empress Frederick, on account of alleged injudicious presentation of facts. The book appears, however.

In Order to Encourage Graduates of Literary and Scientific Schools to undertake the study of Medicine the Chicago College of Physicians and Surgeons offers ten scholarships, each of which is valued $100 a year for three years, to such applicants as present evidence of the best qualifications for medical study.

A Royal Ophthalmologist.—Duke Charles Theodore, a member of the royal family of Bavaria, performed his two-thousandth operation for cataract at his private hospital in Munich, on Friday, April 1. The operation room was decorated with flowers by the Sisters of Mercy employed in the establishment. Duke Theodore performed his thousandth operation for cataract on July3, 1889.

A French Surgeon Wanted the Autopsy though he had cured the patient. Professor Gayet, of Lyons, was the surgeon. Having cured a man of an arterio venous aneurism of the internal carotid artery and the cavernous sinus, and being desirous that this happy result should be verified after the death of the patient, he paid his patient a certain sum for having tattoed on his arm the following lugubrious words: "Anevrisme arterio-veineux du sinus caverneux gueri; priere d'autopsier."

A Fever Anunciator.—The *Lancet's* Paris correspondent tells of an apparatus of recent invention for registering rises of temperature from friction in a machine, from fermentation in a mass of grain, etc. A small metallic bulb half filled with ether is sealed by a corrugated cover. When the temperature rises so as to expand the ether vapor sufficiently the cover is straightened out by the pressure and made to close an electric circuit that works a bell. It is said that the inventor, M. Tavenier, cherishes the project of fitting up hospital wards with these bulbs, each of which, secured in a patient's axilla, shall operate a numbered bell in the interne's room, after the manner of hotel annunciators. By this means, it is expected, a sudden and dangerous rise of temperature in any particular case may at once be brought to the interne's notice.

Hernia of the Fallopian Tube.—Lejars (*Revue de Chirurgie*) recently operated on a woman, aged thirty-nine, admitted into hospital with strangulated right inguinal hernia. The abdomen was distended, the temperature over 102°, a bloody discharge was present, and a fibroid of the fundus of the uterus was detected. The sac contained a reddish fetid fluid, no omentum,and no intestine, but the tube was easily recognized by its fimbriæ. Pus escaped from the ostium, and the entire tube was sloughy. The internal ring was divided; then and not till then, the tube could be drawn forward, and its proximal, non-strangulated portion brought to light. The healthy tissue was secured with catgut, and the mucosa touched with the cautery after section, in order to destroy septic elements. Then the stump was allowed to slip back into the abdominal cavity. The ovary had taken no share in the rupture. In dissecting away the sac the bladder was wounded. A urinary fistula remained for some time. Lejars has collected 11 cases of hernia of the Fallopian tube alone, 8 clinically reported in full, 1 discovered at a necropsy, and 2 more are briefly noted. While tubo-varian hernias are almost always inguinal, 5 of these purely tubal hernias were femoral. In 5 the rupture was on the right side, in 4 the side is not mentioned, in none is it said to have been the left. The youngest patient was thirty-six, the eldest seventy. This contradicts an old theory that such cases are congenital. In 5 cases there was acute strangulation; in 1 the rupture was irreducible and full of fluid; aspiration was followed by fatal peritonitis. A strangulated tube, not gangrenous, may of course be returned into the abdomen, as was done in Brunner's two successful cases; but Lejars' experience of pus in the tube in his case is never to be overlooked.

A Public Debate on Homeopathy.—A large gathering of people of the higher classes of St. Petersburg on April 5 assembled to hear a public debate between champions of homeopathy and of orthodox medicine. In the Russian capital, as elsewhere, the upper classes have a natural leaning towards heresy in medicine, and at the commencement of the discussion their sympathies were almost entirely with the disciples of Hahnemann. The "allopathic" side of the question was upheld, not by a medical man, but by Professor Goldstein, a pharmacist, against whom, therefore, no allegations of professional jealousy could be made. Homeopathy was defended by Dr. Brasal, the leader of the sect in St. Petersburg. Professor Goldstein's criticisms of his adversary's statements made a profound impression on the audience. He pointed out, amongst other things, that "the caustic" remedy popu-

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lar with the homeopaths is nothing but common water. The most careful scientific analysis failed to reveal anything else in it. People usually drink water by tumblerfuls and the homeopathists treat them with single drops of it. Besides water, Professor Goldstein went on to say the chief remedies of the homeopaths are grains of salt, carbon, and silica, and minute quantities of pounded sugar and spirits. Mr. Goldstein thoroughly exposed the absurdity of the well known theory of the dynamic power, and miraculous effect upon the system of indefinitely minute quantities, which divide the fundamental and small unit into units to the number of thirty figures. This proportion he illustrated by the following example: Take a few pinches of salt and throw it into the middle of the Sea of Ladoga, and then travel to St. Petersburg and take a tumbler of water from the Neva, which draws its waters from that sea, and then you will drink a homeopathic medicine. Homeopathy can only claim one merit, and that is a relative one—in prescribing, after long reflection and profound calculation, a few drops of water, it in no way interferes with the course of Nature.

Do Those Who are Seriously Ill Ever Sneeze?—This is a point alluded to by Mr. Jonathan Hutchinson in the January number of his *Archives*. He does not recollect himself to have seen any but fairly healthy persons sneeze. He puts the question with especial reference to the widely spread popular superstition that sneezing is a sign of health and good luck. It is possible, he thinks, that this may have had its origin in the fact that it is for the most part an act restricted to those in fair health. Tylor, in his "Primitive Culture," gives interesting facts as to the prevalence of this creed and as to certain customs associated with it, and traces it in part to doctrines of animism, but Mr. Hutchinson thinks the suggestion he has given may also have some value.

Cruel Anti-Vivisectionists.—The aigrette in a lady's bonnet is the crowning beauty of an egret mother (*Cornhill Magazine*). The collector—and each nesting season fifty men are employed in this business—waits till she is on her nest, her little breast full of peace, and the young just hatched, so that the mother will not leave them easily, though alarmed. He ruthlessly seizes her, tears off her crowning plumes and her wings, and then throws her down, gasping, torn, and fluttering, to die beside her little ones, who, deprived of her fostering care, die also miserably. Lately, at a meeting of anti-vivisectionists, it was a curious instance of "the evil wrought through want of thought" that many of the ladies protesting against the cruelty of vivisection wore these very egret plumes in their bonnets.

Microbes in Dust.—Dr. Manfredi (*Med. Rec.*) has made an elaborate investigation of the dust of the streets of Naples. The number of microbes of all kinds he found on the average to be 761,521,000 per gramme. In those portions of the city under the best hygienic conditions, the average number of microbes was only 10,000,000 per gramme. In the busiest thoroughfares the average rose to 1,000,000,000, and in some of the dirtiest streets it rose to 5,000,000,000 per gramme. In this boundless ocean of life he found a large number of the pathogenic organisms, and the unhealthfulness of the street was in proportion to the number of microbes in the dust. He tested carefully the infective power of the dust, and obtained positive results in seventy-three per cent of the experiments. Of forty-two cases in which he communicated disease to guinea-pigs by inoculating them with the dust of Naples, he found the microbe of pus in eight, the bacillus of malignant edema in four, the bacillus of tetanus in two, the tubercle bacillus in three, besides several others which had the power of inducing fatal septicemia in the guinea-pigs on which they were tried.

The dust of the city of New York should now be tested for microbes. There is reason to believe that a harvest as rich in variety and deadliness as was garnered in Naples could easily be secured. And yet people are surprised at our high death rate.

The True Sweetbread, regarded by gourmands as a great delicacy, is the thymus gland of the calf (*British Medical Journal*). As a rule, this is found only in the fetus and young calf, under the lower surface of the trachea, "partly without and partly within the chest, between the layers of the anterior mediastinum." It is occasionally persistent, but usually disappears within a few months after birth. It is elongated, of a grayish-white color, irregular—that is, lobulated on its surface, and much more resembling a salivary gland and the pancreas than the thyroid. It is commonly known among butchers as the "throatbread," and is rarely found except in animals supplying young veal or lamb. The pancreas is vulgarly termed the "gutbread" or "belly sweetbread," and is the article which would be supplied in the great majority of cases by butchers asked for sweetbread. The thyroid is situated at the upper part of the neck, not at its root, and is not regarded as a favorite article of diet. Though the lobes are closer together than in man, they are spoken of as two, each being named a "kernel" or "gland." As far as we can learn, they are not ordinarily included among the sweetbreads. As compared with the thymus and pancreas, the thyroid is very small, regular on the surface, ovoid in shape, reddish brown in color, situated at the upper part and not at the root of the neck. The thyroid is sometimes confused by butchers with the lymphatic glands of the neck. Its dark color and characteristic shape—convex externally while somewhat concave and flattened where it rests against the trachea—should prevent this mistake. While thymus and pancreas are valued highly, the market value of the thyroid is inconsiderable, and until its association with myxedema it was rarely asked for.

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RAILROAD : NEWS

"Rest and a Change of Scene."—Are you about to prescribe this for either your patients or yourself? If so do not overlook the numerous Springs and Mountain Resorts in the Blue Ridge and Alleghany Ranges on the line of the Chesapeake and Ohio Railway in Virginia.

The White Sulphur, Old Sweet, Sweet Chalybeate, Rockbridge Alum, Hot Springs of Virginia, Healing Springs, Warm Springs, and many others have been known to physicians and recommended by them for over a century.

As an instance of the improvements being made in this section note the fact that "The Virginia Hot Springs Co." is expending upwards of one million dollars in improvements in the Warm Springs Valley which is now reached by a branch of the C. & O. Ry.

Health giving waters, invigorating atmosphere, magnificent scenery, new modern hotels, bath houses, and livery, with moderate rates, good society, cheap round trip tickets, convenience of location and first-class railroad service are some of the attractions of the Virginia Springs Resorts on the Chesapeake and Ohio Railway.

For books descriptive of the various resorts, rates, etc., address, E. B. Pope, Western Passenger Agent, St. Louis, Mo.

The Direct Route East.—The Ohio and Mississippi Railway, running east from St. Louis, is the short and direct line to the National Capital, and offers a thorough train service which is not equaled by any other line. It is, properly speaking, the only direct through car line from the Mississippi River to Washington.

The Ohio and Mississippi Railway is the only line running all trains through solid from St. Louis to Cincinnati; the time being less than ten hours; and the only line running double daily lines of Pullman Vestibule Buffet Sleeping Cars from St. Louis to New York via Washington, Baltimore and Philadelphia without change.

The O. & M. has an enviable reputation for speed, comfort and safety, and the regularity of its trains is proverbial with the traveling public; in practice it almost realizes the ambition of every railroad management—to have trains always on time.

The popularity of the O. & M. Railway compels it to run three daily trains to Cincinnati aud two to Louisville to accommodate its steadily increasing travel; fully 95 per cent of the business from St. Louis to and via Cincinnati eastward being accredited to the O. & M.

Both the day and night express trains of the O. & M. are equipped with elegant Vestibule Day Coaches and Pullman Vestibule Buffet Sleeping Cars. Pullman Buffet Parlor Library Cars are also on day express and Free Reclining Chair Cars on night express trains.

All trains of this line connect in Union Depots with those for points in above-named territories.

For tickets via the O. & M. Ry., and further information, call on agents of connecting lines or address G. B. Warfel, General Western Passenger Agent, Ohio and Mississippi Railway, 105 N. Broadway, St. Louis, Mo.

Physicians who have tested Andunia proclaim it the most wonderful antipyretic, analgesic and anodyne of the 19th century. See advertisement.

Alumnol.—The new astringent and antiseptic is meeting with unbounded success wherever used when indicated. Write to Schulze-Berge & Koechl, 79 Murray St., New York City, for literature. See advertisement.

Katharmon has certainly proven its value as an antiseptic and germicide of marked qualities. Its pleasant nature withal has made it a favorite with the profession as well as pleasant to patients. See ad on colored page.

Artificial Lithia Water are certainly the most reliable, so far as uniformity of the lithia salts in quantity is concerned. We know of no better preparation than the Lithia-Potash Water (Garrod Spa) of Enno Sander. It is invaluable in rheumatic and gouty affections. See ad page.

Cod-Liver Glycerine in Faulty Digestion in Summer.—Almost invariably, the diseases incident to summer are produced from faulty digestion, and as a result are followed by emaciation. The fault at first lays with the peptic-glands of the stomach which become dormant, perhaps, from drinking large quantitives of water between meals. A rare combination of digestive, alterative and reconstructive properties, which fully meet these indications, is found in Cod-Liver Glycerine; besides it can be given with other indicated remedies. The *modus operandi* of Cod-Liver Glycerine as a digestive is peculiar to itself, and possessed by no other remedy, viz.: It extracts the natural peptones from the dormant peptic glands of the stomach, and compells each stomach to digest its own food in the natural manner. This extracting of the peptones (like extracting milk from a cow's udder) stimulates renewed secretion, and in a short time the dormant peptic glands are active, and healthy, and your patient is well. Whereas, if you use pepsine the dormant peptic glands remain dormant, and in time become atrophied and lost to the economy; besides it is hard to believe, that God in his wisdom, ever intended that human-food should be digested by hog-pepsine.

—Dr. J. E. Chambers, in *Sanative Medicine*.

A Practitioner devoting especial attention to the diseases of children, says: "In the treatment of choleraic diarrhea we are safe, it matters not at what time we may be called, in administering some antiseptic medication, something which will prevent fermentation, and have a destructive effect upon the septic germs more than likely present in the alimentary canal. Happy effects are often secured by the use of Listerine properly diluted; a favorite prescription is the following:

℞ Lambert's Listerine,
Glycerine (c. p.),
Syr. Simpl.,
Aquæ cinnamon, - - - - - - aa ℥j.
M.

Sig. Teaspoonful every one, two or three hours, as may be indicated.

Taking into consideration the component parts of Listerine, it impresses me favorably as a prophylactic and remedial agent for cholera, along with other intestinal disturbances. The eucalyptus, thyme, gaultheria and boracic acid which it contains are all antagonistic to germ life and oppose fermentation. The preliminary diarrhea (cholerine, as it is called) may well receive teaspoonful doses of Listerine combined with the same amount of glycerine; in fact, I should be inclined to recommend to the laity this combination as a prophylactic measure."

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MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

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ORIGINAL ARTICLES

Surgical Treatment of Uterine Fibroids.

BY A. H. CORDIER, M.D., KANSAS CITY, MO.

Read before the Missouri State Medical Association at Sedalia, Mo., May 17, 1893.

How shall the cervix or stump be disposed of in suprapubic or abdominal hysterectomy is a question, which at this time is being quite extensively discussed by various writers and operators, the opinion of each writer being in accord with the operation performed and the successes attained by a trial of the various methods, or the adoption of a choice from the list recommended by others, one writer claiming total extirpation as being the ideal method, another amputation and dropping the stump, still another anchoring the stump in the lower angle of the abdominal incision by some one of the various devices.

I cannot in an article for a medical society (the time of reading being limited) enter into the details of the various steps in the performance of each method above alluded to, hence my paper will treat principally of the technique of the operation, *i. e.*, ventral fixation of the pedicle.

We have arrived at a period in the history of pelvic surgery where we cannot yield to the plea for *ideal surgery*, as far as a theory is concerned, but must submit to the more intelligent entreaty for good results and low rates of mortality.

If a skilled operator has a preference or is partial to a particular method, he is certainly entitled to do his favorite operation, provided his results are equally as good as others doing the same work in any other way. If a large series of cases be reported with a mortality of five per cent after a given method by one surgeon, and, on comparing this percent with the work of another doing the operation with some modifications, you find a death rate of twenty per cent, you may rest assured the fault in the majority of instances will not be found in the operator so much as in the faulty principles underlying the procedure of his choice.

The edematous myoma makes its appearance (generally a single growth) at almost any time after puberty, differing in many respects in its history and behavior from the ordinary fibroid. It is a neoplasm of rapid growth in the majority of cases, as a rule unaccompanied by the profuse hemorrhages so characteristic of the hard fibroid. The growth attains enormous proportions, producing late pressure-symptoms, and not only fails to disappear after the menopause, but may continue to grow, and in some instances with greater rapidity than prior to the cessation of the menses. The removal of the appendages fails to check its growth.

The experience of Mr. Tait relative to these growths becoming malignant has been also the experience of others. I think many of these so-called edematous myomas are sarcomata from the beginning, thus making the total removal by early surgical means all the more imperative and advisable.

It is not an easy task from the macroscopinal appearance of the growth to differentiate a sarcoma from an edematous myoma.

Pozzi says: "They (edematous myoma), are *usually* benign."

A fibro sarcoma may be said to always have its origin in a myoma or fibro-myoma.

The "recurrent fibroids" of some writers are in reality sarcomas. Edematous myomas may grow so insidiously as to escape the patient's notice, until from its size, pressure symptoms may develope. The old statement that uterine fibroids are more frequently met with in the negro race, is not sustained by the experience of many gynecologists procticing in the Southern States.

Many of the old so-called fibroids in the negro are now recognized by the modern diagnostician as cases of pyosalpinx, the result of gonorrhea, abortions, or tuberculosis, three diseases of frequent occurrence in this race. The diagnosis of this form (edematous) of tumor occurring at or about the menopause is attended with no little difficulty, as its growth is often rapid, unattended (sometimes) with severe suffering from pressure, as the rapid growth causes it to rise quickly out of the pelvis. If the menses have recently ceased, it will tax the skill of the most experienced operator and diagnostician to arrive at a positive conclusion. The tumor has a semi fluctuating feeling about it, that makes one doubt the infallibility of his diagnostic ability, and even as was the case with Mr. Tait, in two instances: "with one hand in the abdominal cavity annd a finger of the other in the

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vagina the exclusion of pregnancy was impossible or so doubtful as to warrant the closure of the abdomen without removing the suspected edematous myoma."

I have seen an eminent gynecologist open the abdomen and close it again, leaving one of these growths larger than a cocoa nut untouched, fearing to remove it lest it prove to be a pregnant uterus.

The growth was subsequently removed by the same operator. The presence of the quickened fetal heart sounds in a circumscribed locality, would be evidence that a pregnancy existed, but there is often a circulatory sound in the tumors of the uterus which could be easily misinterpreted.

The better plan would be to delay all operative interference when in doubt until after the normal duration of pregnancy has transpired. If in doubt, and urgent symptoms, pointing to the tumor as their sonrce, demand earlier interference, proceed with all caution to the removal of the growth.

If the possibility of pregnancy is eliminated in the case, a positive diagnosis is not imperative, although desirable, for whether an ovarian or a par ovarian cyst, a fibroid, or an extra uterine pregnancy, it matters not, only in as far as concern the steps in the various operations for their removal. The abdominal surgeon must be quick to recognize these conditions when once the peritoneum is opened, and as equally prepared to deal with the various complications liable tc be met unexpectedly in any case.

The low rate of mortality from the removal of fibroids by a suprapubic hysterectomy in the hands of men of recognized ability each year brings converting evidence of the safety of his method of dealing with large fibroids, whether multi-nodular or edematous.

Each year brings fewer advocates of the enucleation procedure, and the removal of the appendages is being more and more limited in its application as the difference in these growths becomes more understood.

I believe where the removal of the appendages has failed to check the growth of fibroids, a close investigation of the growth will reveal its true character to be an edematous myoma, and not a fibroid in the accepted sense of that term as applied to uterine tumors.

Splitting the capsule and enucleation is dangerous in the extreme, patients dying from hemorrhage, peritonitis and sepsis. The edematous myoma refuses to be checked in its growth by any procedure short of a hysterectomy or total removal of the same by other surgical means, hysterectomy being the proper manner of removal, giving the lowest rate of mortality performed as I shall describe it.

Dr. Jos. Price says, (and if any surgeon is entitled to an opinion, he is): "The removal of a healthy tumor from a healthy peritoneal cavity should never be followed by bad symptoms, if the operation has been complete in every detail. Imperfect work will always be followed by disastrous results."

In no class of surgical work are complications unexpectedly found, more frequently and difficult to deal with than in abdominal and pelvic surgery.

The operator who begins an abdominal operation should not only be able to quickly recognize an unlooked-for complication, but equally as deft in dealing with the same. An intestine may require (from its firm attachment to the tumor), a resection, a bladder may be injured, a gall-bladder ruptured, a ureter divided, etc. All these accidents have occurred in the hands of the most skilled operators.

Accidents of this serious character should not occur with a frequency in the hands of any one operator to make it a noticeable fact that he gets all the *complicated cases.*

The Fallopian tubes are found diseased with a frequency in fibroids as to lead one to suppose that there exists a causal relationship. This supposition certainly finds support in the known fact of the increased flow of blood accompanying tubal disease, as indicating a uterine hyperemia, a recognized factor in the causation and maintenance of the life and growth of multi-nodular uterine fibroids.

The futility of electricity in the treatment of uterine fibroids has been proven by many long and faithful trials in the hands of competent men, yet you find today advocates of this agent whose sincerity should not be doubted. That a tumor disappears occasionally while using electricity no one doubts, but it is equally true that large neoplasms of the uterus have spontaneously disappeared with almost equal frequency and certainty.

Dr. Cushing, of Boston, in a late discussion on fibroids, said: "Under Dr. Price's influence I have abandoned the use of electricity. I started in with electricity with enthusiasm, got a battery—a very good one—it is now for sale. I worked very hard on fibroids and found this much, I am free to say, * * * a great mass of nervous symptoms ond worriment can be relieved precisely as well whether the current is turned on or not. That is a simple fact."

Dr. Bear, in 1892, reported a case in which he performed the combined vaginal and abdominal hysterectomy (with ligatures).

In 1882, Dr. Emmet also reported a case in which he performed the combined vaginal and abdominal hysterectomy.

The same author also performed total extirpation through an abdominal incision (the so-called Eastman operation) in five cases prior to 1882. His mortality was 100 per cent.

Schroeder's method consists in removing the tumor at cervico-uterine junction or as near this point as it is possible, cauterizing the canal, stitching the edges of the stump together and sewing over the peritoneal surfaces. The stump is dropped into the abdominal cavity.

Kelly and others stitch the stump to the abdominal wall but extra-peritoneally.

Eastman (1675) ties off the broad ligaments, opens the vagina, vaginal edges ligated and cervix removed.

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Peritoneum closed over the raw surfaces and abdominal wound closed.

Byford ligates broad ligaments, then pedicle in sections, opens anterior vaginal wall and draws the ligatures into the vagina and inverts the stump into the vagina.

Peritoneum over bladder is carefully stitched to that covering the stump and abdomen closed.

Pean's method being the one of my choice is one I shall describe in full. Mr. Tait, Drs. Price, Bantock, Keith, McMurtry all perform the Pean operation.

Operation.—The preparation of the patient for a suprapubic hysterectomy is one of much import, and too much care and attention cannot be given the details of the same. Cleanliness should be the watch-word and the eyes of the operator the sentinel, that no unclean nurse, sponge, instrument, or assistant, cross the aseptic halo.

A larger number of instruments are necessary in doing a supra-vaginal hysterectomy than is required in an ordinary "section." The operation itself demands a variety of instruments, and to be ready to meet unexpected complications requires more added to the list—one dozen hemostats, two hysterectomy pins, Koeberle serre-noeud, with delta metal wire (this wire may be obtained from Krohne & Sessemann, London), an extra Koeberle, in case of a break, should be on hand, a knife for the abdominal wound, a large scalpel to cut away the tumor, four large tissue forceps to clamp the broad ligaments while making the pedicle, strong straight needles to sew the abdominal incision; silkworm-gut sutures, silk two sizes, for ligatures—bladder and intestinal injuries require a fine silk suture—a strong, straight needle to sew through the pedicle to reduce its size and to keep the peritoneum from retracting; large flat sponges, smaller round sponges; irrigator, drainage tubes, piston syringe to empty tubes; dressing material, iodoform gauze, etc.

I prefer ether as an anesthetic in all abdominal operations.

Time is an important item in the performance of a hysterectomy, and the operator who recognizes this and completes his work quickly will, everything else being equal, have the lowest mortality.

The abdominal incision should be inside (to begin with) a little nearer to the umbilicus than is usually made in a "section" for the removal of diseased appendages. This precaution is made necessary to avoid wounding the bladder in the first incision, as this viscus is frequently pulled up by the growth of the tumor. Having entered the peritoneal cavity and settled the error or correctness of the diagnosis, proceed to sweep the fingers or the whole hand over the growth, going first above, then to either side, finally examining very closely for the location of the bladder; satisfying yourself that the growth can be removed (it is rare that one cannot be removed) your incision is carried downward to the full limit of safety, and if need be upward above the umbilicus. The growth is now brought forward through the abdominal opening. If omental adhesions are present they are "sponged" off or double-ligatured, and cut until freed from the growth.

In delivering the growth be careful that no undue force is used with the fingers in the region of the broad ligaments, where you will find enormously enlarged and tortuous blood-vessels. The same precautions should be exercised posteriorly, for here in many cases you will find large and vascular adhesions, which if torn across, bleed profusely, and are found and ligated with difficulty.

In the globular odematous myomas you will often find that it is with much difficulty that they can be removed from their snugly-fitting pelvic mould.

They can be easily dislodged if you can succeed in getting air to the bottom of the pelvis by pressing the finger or a clean catheter alongside of the tumor to the bottom of the pelvis. If you fail in this, then the cork-screw of Mr. Tait will be of much assistance to you. This instrument is screwed into the "fundus" of the growth, and traction made slowly and steadily until the tumor is delivered.

Examine again closely for the location of the bladder, which is usually marked by a difference in color and the course of blood-vessels, and a faint line may be seen marking its limit when made out. If still in doubt, have an assistant quickly introduce a catheter, and its limit is then easily made out. If the bladder is pulled up too high to admit of the wire being applied, carefully dissect it from the walls of the tumor and permit it to drop out of the way. If the pedicle is small the wire can now be applied, the pins having been placed in position before the wire is tightened. The pins should be placed parallel and exactly across the abdominal incision and on a level with the surface of the body.

If the pedicle is too large to admit of being constricted by the wire and fastened in the lower angle of the wound, pass a large tissue forceps on either side on broad ligaments, two to each ligament, and cut between them down to the tumor, and from side to side in front and behind, having previously caught the peritoneum with hemostats, in many places around the tumor, just below the proposed line of incision in the capsule and *above the bladder attachment.*

This last precaution guards the bladder and prevents the peritoneum and capsule retracting beyond the proposed location of the wire. Having divided the capsule rapidly dissect it down to just above the location to which the wire is to be placed, you have almost practically enucleated the tumor, and have reduced the pedicle from the size of the thigh to that of the wrist, and that, too, with very little loss of blood and time. The pins are now pushed through the capsule and the wire tightened by the noeud and the remains of the tumor and capsule are cut away an inch from the pins, and the wire tightened again until all oozing stops. At that stage of the operation when the tumor is delivered, a large flat sponge should be placed over the intestines,

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and two or three sutures passed through the parieties and grasped by heavy forceps and crossed over the line of the incision. This protects the intestines and keeps them in place.

The hemorrhage being controlled by the wire, the cavity of the cervical canal is cleansed, and a piece of gauze packed in it to prevent infecting the peritoneum during the completion of the operation. The peritoneum is washed or cleaned by sponging, if it needs it, especial care being given the location of the bladder, as here blood-clots are liable to be left behind. Two strong strings are placed around the pins to be used in pulling the stump into the lower angle of the incision and to hold it steady while the *peritoneum is being stitched to the pedicle below the wire.* Fine antiseptic silk is used for this sewing.

Union takes place quickly between the parietal and pedicle peritoneum, and soon seals that cavity from any outside source of infection. You now introduce your sutures, then remove the large flat sponge and irrigate or clean out the recesses of the peritoneum, especially the pelvis and, if the tumor removed was a large one, in the "flanks" also.

Silk-worm-gut sutures should be used in closing the abdominal incision.

You now take a strong, straight needle, armed with stout silk, and sew back and forth through the pedicle to reduce its size, to aid in controlling hemorrhages, should the wire break in your absence, and to prevent the peritoneum retracting below the wire (not likely to occur), and to reduce the size of the stump.

A drainage tube can be used if the usual indications for its use are present, such as oozing from adhesions, free fluid in the peritoneum at the time of the operation escape of pus from a pyosalpiux (a complication of frequent occurrence in fibroids of the uterus).

Care must be exercised in approximating the cut surfaces about the pedicle, for fear too much tension is placed on the integument surrounding the stump and cause stretching of the skin. Pledgets of iodoform gauze are applied under the edges of the stump and under the pins to prevent pressure on the skin, and the stump is covered with iodoform to hasten the drying process. The usual dressing should be applied with gauze, and the many-tailed bandage. The Koeberle is permitted to project from the dressings that it may be tightened as often as may be necessory without disturbing the patient or her dressings.

If the pedicle is a large one, the dressings will soon be soiled by the discharge. *There should not be a large one.* The nurse is instructed how to tighten the wire if oozing of blood is detected. The wire is tightened by a turn or two of the clamp each day until the stump drops off, which usually occurs from the eigth to the twentieth day. The dressings are changed as often as it is necessary, every aseptic precaution should be carried out in its fullest detail in doing the operation and in the treatment of the pedicle afterwards, if suppuration about the stump takes place, it is due to a want of aseptic care on the part of the surgeon or nurse.

If this accident has occurred, it is best treated by keeping the groove around the stump lightly packed with iodoform gauze saturated with pure listerine or campho-phenique. Ater the pedicle drops, there remains a shallow cavity that is soon filled up by healthy aseptic granulation tissue.

This description of the technique of a supravaginal or supra pubic hysterectomy is one applicable to all uncomplicated cases. The inventive ingenuity of the surgeon will find here a broad field in which to extend in meeting unlooked for complications.

If I have succeeded in making the various steps of this, the choice operation for the removal of uterine myomata, clear and plain to those unacquainted with its technique, the object of writing this paper has been attained and my desire gratified.

I beg to submit to your consideration the following deductions:

1. All rapidly growing fibroids of the uterus should be removed.

2. Procrastination, tinkering, and electrical darts convert many a simple case into one of great magnitude, with many complications, making the work of the operator very difficult and hazardous to the patient,

3. Small, stationary, hard fibroids, without dangerous symptoms, may be with safety allowed to remain, especially in women nearing the menopause.

4. Rapidly growing œdematous myomas may not present any dangerous symptoms, may occur at any age, may and do continue to grow after the climacteric, removal of the appendages does not check their growth.

5. Oedematous myomas should be removed by a hysterectomy as the entire uterus will usually be found taken up in the body of the neoplasm.

6. Fibroids undergoing mucoid or colloid degeneration should be removed by a hysterectomy.

Suppurating fibroids, when not extruded into the vagina, should be removed by a hysterectomy.

8. Pediculated fibroids, if the pedicle is small, may be removed with safety by taking all due precautions to guard against hemorrhage.

9. All hysterectomies (with Dr. Price's qualification) should get well.

10. Oophorectomy or salpingo-oophorectomy as a means of relief for tumors of the uterus is being more and more limited in its sphere by a more thorough understanding of the nature of these growths

11. Medicinal agents and electricity may in many instances relieve symptoms for a short time, but the uncertainty and the dangers attending their use more than outweigh the expectations for good.

Celiotomy has been adopted by several medical societies and by many American and English surgeons; also appears in the new text-book of surgery edited by Keen and White. It is by far the most suitable word to be applied to all anterior abdominal operations.

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Report of a Remarkable Series of Thirty-Three Cases of Diphtheria Treated by the Tartaric Acid Corrosive Sublimate Method.

BY M. GRAHAM TULL. A M., M D,

Visiting Physician to the Baptist Orphanage.

Read before the Philadelphia County Medical Society, April 26, 1893.

During the summer of 1889 my attention was attracted to an editorial in the *Medical News* which gave a synopsis of an article that had appeared a short time previously by Dr. Rennert, of Frankfort-on-the Main.

The substance of the article was to the effect that Rennert, while passing through an epidemic of diphtheria of great malignancy, and in which he had lost a great many cases, recollected that Laplace had but recently proved by direct experiment that corrosive sublimate in solution, slightly acidulated with tartaric acid was, by far, the most efficient of any of the germicides to be found, as applied to the bacteria of diphtheria.

Whereupon Rennert immediately changed his treatment. In addition to the conventional methods he had the throats thoroughly swabbed every six hours with a 1:500 tartaric acid corrosive sublimate solution, making sometimes four or five applications at one sitting. After instituting this procedure he did not lose a patient, although the epidemic had not apparently begun to decrease in virulence.

I was at this time using as a disinfectant in obstetric work the so called tartacid sublimate tablets of Mulford & Co., of Philadelphia, consisting of 3.85 grains of hydrarg. bichloride to 19.25 grains of tartaric acid. The addition of one of these tablets to four ounces of water makes a 1:500 solution. I, therefore, resolved to adopt Rennert's plan in future cases of diphtheria, as the rationale of the method appealed very strongly to me.

It so happened that the following autumn I had from forty to fifty cases, and my experience fully corroborated the results of Dr. Rennert. I lost no cases treated by this method, although three children who had contracted the disease from my patients died of it. Two of these I saw after they had been ill a number of days, bnt they were then almost in articulo-mortis. The third was a case of my own which did so well under the treatment that the parents, against my advice, persisted in their previously-formed intention of moving to another part of the city. The great distance debarred me from continuing in the case, and I subsequently learned of its death.

After this my cases were so few and scattered that, although the method proved eminently satisfactory, I kept no record of them.

During the autumn and winter of 1892, however, the following very interesting and, I trust, instructive series of thirty three cases came under my observation at the Baptist Orphanage, of Philadelphia.

Late in the preceding winter two cases of diphtheria, in half grown children, appeared in a farm house directly opposite and distant about one hundred yards from the Orphanage. The disease presented a very malignant aspect, and, notwithstanding the faithful care of a competent brother practitioner, both children died after an illness of a week or ten days. A number of other cases appeared in the village at this time, one of which I happen to know resulted fatally.

The following August one of the boys at the Orphanage, a lad of sixteen years of age, who had been assisting the gardener spread manure that had been obtained from the farm where the children had died the preceding winter, was suddenly taken ill with fever, vomiting, and slight sore throat. My first visit being made at dusk, I fancied the case one of beginning scarlatina, of which we had had a few cases the preceding spring; but upon my visit the following morning the diagnosis of diphtheria was apparent, and I lost no time in having himtransferred to the Municipal Hospital, dreading the entrance of the disease among so many children.

Unfortunately, we were too late, and in the next few days nine of the boys from the same cottage developed well-marked cases, and were at once isolated in a separate building which had been converted into a temporary infirmary. A trained nurse was obtained and the children placed under treatment at once. As a routine measure, each child was given the following tablet-triturate: hydrarg. chlor. mit., gr $\frac{3}{8}$; sodii bicarb., gr. j.; ipeac, gr. $\frac{1}{8}$; every half hour until free movements of the bowel ensued, and after that they were continued every two hours. The following mixture, modified to suit the varying ages, was also employed: ℞—Quiniæ sulph., potass. chlorat., potass. citrat., syr. ferri chlor., syr. yerbæ santæ.—M. et Sig., one drachm every two hours.

The nourishment consisted of liq. peptones and milk at the commencement of the cases; rapidly followed by a full diet as the patient convalesced. In addition to this the nurse was instructed to apply every three hours by means of a cotton swab, a 1:500 solution of the tartaric acid corrosive sublimate tablet, made by dissolving one of Mulford's tablets in a gill of water.

The results were immediate and remarkable, the temperature falling, the pulse becoming normal, and the aspect of the child undergoing an astonishing change. The course of the membrane across the fauces was checked, and in each case came away in about forty-eight hours. All of these children were practically well in two days, while the first case, which was transferred to the Municipal Hospital, was quite seriously ill for some time, and was not discharged for over six weeks.

The effect of this unusual success in the first nine cases was, in some respects, followed by unpleasant results, though of great value to this paper, furnishing, as it does, complete check experiments upon my other cases.

A feeling of skepticism was developed in the minds of the attendants, and even the nurse was tainted by

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the prevailing feeling. So that, after the children first affected were about ready to return to their cottages, being allowed to play on the veranda on pleasant days, the strict quarantine which I had endeavored to establish was completely relaxed, and visits of more or less ceremony were exchanged between the nurse and the matrons of the other cottages.

I had promised to return the children to their own building on Wednesday, but on the Friday preceding five of the children in the so-called children's cottage were taken ill with fever, vomiting, coated tongues, etc. not, however, complaining of their throats.

The matron of their cottage, who was a law unto herself said: "The doctor was mistaken in thinking that the children who were sick had had diphtheria and, that she would not allow her little ones to be taken to the infirmary, but would show him that she could treat them as well as he." She, therefore, had them taken to the third story of her building, and allowed the well to stay with and amuse the sick. This was, of course, in direct opposition to my order that any child with the slightest suspicious symptoms should be sent immediately to the infirmary, where we had provided a separate apartment for such cases.

The first child was taken ill on Friday, and on Monday evening, after what I had hoped would be my last visit to the infirmary, the matron stopped me to say that she had five children ill with a slight stomach derangement, assuring me at the same time that there was nothing wrong with the throats, as she had carefully examined them. I declined to see them then, having just left a diphtheritic atmosphere, but called the next afternoon, having been prevented from going earlier, owing to urgent professional engagements. To my horror and disgust I found the children had had diphtheria for some days, their sickness having been carefully concealed from me. They were at once removed to proper quarters, but the disease had made such headway that in four or five days three of the five died, all of them dying of heart and kidney involvement being victims, in my opinion of the development and absorption of the diphtheritic ptomaine. After this fresh outbreak we had eighteen other cases, two of whom died. One a child two years old with a very bad family history, all of his family connection being dead, and the other a child four years old, also with a bad family history, who at the height of the diphtheria developed a very violent attack of measles and succumbed to the combined force of the two diseases.

I have only been able to get the darts of the first nine cases, which I here append:

Case I.—George T., aged eleven years, entered the infirmary September 5, 1892. Temperature on entering at 6 P.M. 102°; pulse, 120. At 8 P.M. after swabbing, temperature 100.8; pulse 100. September 6th, 11 A.M. Temperature, 101°; pulse, 99. 11 P.M. Tem perature, 99.4°; pulse, 80. September 7th, 2 A.M. Temperature, 98.4; pulse, 84. The diphtheritic patch disappeared. Uninterrupted recovery.

Case II.—Harrr McK., aged ten years, admitted September 4, 6 P.M. Temperature, 98.8°; pulse, 84; throat very much inflamed, but no patch. 5th inst. Throat considerably ulcerated. 8 A.M. Pulse, 80; temperature, 98.6°. 6th inst., 5 A.M. Pulse, 69; temperature, 98 4°. Patch disappeared. Uninterrupted recovery.

Case III.—Thomas H., aged ten years, admitted August 27, 1892, 4.30 P.M Pulse, 105; temperature, 101°. 10 P.M. Pulse, 110; temperature, 102.6°. Throat with large, dark patch. Treatment continued through the night, and recorded every two honrs. August 28, 12 M. Pnlse, 60; temperature, 98.4°. 6 P.M. Pulse, 84; temperature, 98°. 12, midnight. Pulse, 86; temperature, 98.4°. Ulcerated condition disappeared on 28th inst. Uninterrupted recovery.

Case IV.—Fred D., aged nine years, admitted August 39, 4 P.M. Pulse 105; temperature, 104°. 7 P.M. Temperature, 103. 10 P.M. Temperature, 100.6°. 31st inst. Temperature, 99.2°. September 1, 1 A.M. Temperature, 98.8°. 1 P.M. Temperature, 98.4°; pulse, 80. In this case on entering he had offensive breath, large patch extending back on the fauces, coated tongue, flushed face, bad headache, etc. Recovery was uninterrupted.

Case V.—Elmer G., aged eight years, admitted August 31, 2 P.M. Face flushed; throat badly ulcerated extending upon the fauces. Pulse, 103; temperature, 101.6°. 5 P.M., temperature, 101.4°; 8 P.M., 100 4°; 11 P.M. 100°. September 1, 2 A.M., temperature, 99.8°; 2 A M., 99.8°; 2 P.M. 99.4°; 11 P.M., 98 6°. September 2, 2 A.M., temperature, 97.4°. Uninterrupted recovery.

Case VI.—Roland S., aged seven years, admitted August 31. Patch large and extended. Breath very offensive. Glands on left side enlarged. 11 A M. Pulse, 116; temperature, 102.2°. 2 P.M Temperature, 103.6°; 5 P.M., 102°; 8 P.M, 101.2°; 11 P.M., 100°. September 1, 2 A.M. Temperature, 98 8°; 11 A.M., 102°; 2 P.M., 99°; 8 P.M., 98.4°. Uninterrupted recovery.

Case VII.—Thomas C., aged twelve years, admitted September 3. 5 P.M. Temperature, 102°; 8 P. M., 103°; 11 P.M., 102°. 4th inst., 2 A.M. Temperature, 102 2°; 5 A. M., 100°; 11 A.M., 90.4°; 2 P.M., 98.6°. 5th inst., 2 A.M., 98.4°. Recovery uninterrupted.

Case VIII.—Willie H., admitted August 27. Diphtheritic patch large. Cervical glands very much swollen. Temperature, 7 P.M., 99.6°. Ranged below this until the 29th inst., when at 4 P.M. it fell to 98.4°, and remained so. Recovery uninterrupted.

Case IX.—Charles W., admitted September 10. 5 P.M. Temperature, 102.2° Throat involvement marked. 8 P.M. Temperature fell to 98.6°. 11th inst., at 8 P.M. was 98.4°, and remained so. Recovery uninterrupted.

With the exception of those who died the other cases all presented this same clinical picture. In some of the fatal cases I was obliged to use a spray of hydrogen peroxide in addition to the bichloride to purify the air, on account of the intensely disagreeable odor, but my experience with it as a remedial agent has been so un-

satisfactory as compared with the bichloride that I rarely use it, excepting as a deodorizer. The danger of salivation from the sublimate solution seems to be nil, as in a few laryngeal cases I have given as much as the eighth of a grain every two hours in addition to the local use, although in such cases I think the drug should be carefully watched. Nor is there any danger from the patient swallowing the cotton, as in one instance a patient of mine did, owing to the cotton being so carelessly rolled on the holder that it came off in the child's mouth and was swallowed. Even in this case the dose of the bichloride is not excessive. A drachm of the solution only contains one eighth of a grain, and as the ordinary tuft of cotton used for such purposes will only hold a teaspoonful of the solution, and almost all of this is expressed out of the cotton against the fauces, and expectorated, the amount swallowed is not more than a tonic dose.

The advantages of this method are many, and the rationale of it appeals very strongly to the judgment.

We all recognize the fact that the diphtheritic germ is not markedly aggressive, and we know that a necessary concomitant to its spread is a proper culture field. By experience we have learned that the throat of a delicate child furnishes a good culture medium, while that of a robust child will fight it off successfully. Therefore, anything that detracts from the value of the throat as a culture medium adds to the natural resisting power of the susceptible child and raises him to the level of the child of stronger constitution, who needs no extraneous aid. This desideratum is obtained when we have a wash which, though deadly to the germ, is practically harmless to the child. Then, by the death of the bacteria, the membrane is limited and the danger of subsequent mechanical obstruction is obviated. In destroying the germ we also cause a cessation in the formation and absorption of the ptomaines, thus lessening the risk of paralysis, septicemia, heart failure, albuminuria, and all the train of symptoms that follow in the wake of these powerful animal alkaloids. Another advantage is that the treatment is quite as satisfactory in the treatment of the less serious throat and tonsillar affections. I have found nothing act so rapidly and certainly in simple ulcerative tonsillitis or in the follicular variety, the subjective symptoms in both yielding at once. Then, again, it lessens the chances of the spread of the disease through a house or neighborhood, and reduces to a minimum the danger to the attending physician, as the disinfection is carried out at the very fountain head of the trouble. Instead of hunting the germs in the nooks and crannies of a room, they are attacked in their own citadel.

And still another advantage in this method of treatment is that no time is lost, as the necessary tablets furnish a part of the physician's obstetric armamentarium. It is my practice to at once give the attendant of my patient a tablet, with minute instructions as to how to apply the wash. My experience has taught me that a good method is to make the applications every three hours, and simply to press the cotton against the membrane, thus soaking it. The second or third day the membrane becomes readily detachable, and usually comes away on withdrawing the cotton. Formerly I thought it necessary to rub and tear the membrane loose, but I have never seen any benefit from it, while it is very annoying to the patient. As the patient begins to convalesce I make the intervals of applications six hours, and, finally, twelve hours apart. While my results have been generally obtained by means of the cotton applicator I can see no reason why the use of the atomizer should be interdicted, although in an unruly child it is almost as difficult to use one method as the other.

In conclusion, I claim for the method that, in competent hands, such as Dr. Rennert's, and under the peculiar circumstances in which a perfect check experiment was furnished, such as in my own cases, it has proved a simple and perfectly satisfactory remedial agent, and I beg for it a thorough trial, hoping that it may prove in the hands of others all that I have obtained from it.

Our Vocation.—In an address delivered before the Medical Society of Southeast Missouri, the President, Wm. R. Goodykoontz, M.D., says: This vocation of ours is indeed a grand one. It is as broad as the world is wide—one that knows no night, no day, that recognizes neither calm nor storm; one that presses as steadily on through the snows of Winter as the heat of Summer, making no note of the budding Spring with its coaxing showers, nor the varied hues of the falling leaves of Autumn, but going on, establishing itself in every country, every clime, claiming an inherent right to the palace of kings, and equally proud to exist in the cottage of the humblest peasant. A vocation honored by all people of every tongue, a calling unrestricted by civilization, it goes on, on; enters the haunts of, is encouraged, even welcomed, by the savage tribes of the most distant lands. It knows no nationality; recognizes no creed; gives allegiance to no party. It claims alike as its subjects those of master minds and the model of clay bereft of reason. In war it knows no enemy. It enters the palace, as a prison; and the prison, as a palace. It requires a compliance with, or an observance of, no law, sacred or profane. It is indeed a great calling—so great, so important that the flowers of Spring, in all their beauty and sweetness, vie with each other in contributing to its advancement. The fruits of Autumn withhold not their hand. So great, so important is it, that earth readily yields up her most precious minerals as a token of appreciation, while the clouds of heaven send forth the lightning to aid in its progress. It is unselfish, so unselfish that if prosecuted to a successful termination of the end desired would obliterate its own usefulness in that it would annihilate the germs of disease, and secure for the human family a condition of perfect health.

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EDITORIALS

L. T. Riesmeyer, M.D., Editor.

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Too Much Expected of Pathologists.

It does not infrequently happen to pathologists that a colleague will send a piece of tissue to his laboratory with no more information about the specimen to be examined than the request: "Please, doctor, examine this specimen and tell me what it is." This reminds us of a medical student who had cut away a piece of a nerve and, holding it up in his hand, asked the demonstrator of anatomy, "Doctor, what nerve is this."

In order that a pathologist may be able to give an opinion he should always insist upon as complete a history of the case as possible, and should also be informed as to the anatomical region from which the specimen was obtained The specimen should immediately after removal be placed in a hardening fluid, alcohol or Mueller's solution which should be renewed, if the specimen is not the same day turned over to the microscopist, according to the rules laid down in books on pathology. Poorly preserved specimens, specimens placed into the hardening fluid while no longer fresh or specimens insufficiently hardened do not stain well nor can fine sections be made of them, and may thereby in doubtful cases cause great difficulty in differential diagnosis.

There are instances where even with a faultless preparation a differential diagnosis may be difficult or impossible. For instances, sometimes a gumma may present exactly the same picture as a round cell sarcoma and the former may be mistaken for the latter. It occasionally happens that a section of a tumor is turned over to a microscopist, who is not acquainted with the history of the case, his diagnosis may be sarcoma, the tumor is removed, grows again and, upon administration of mercury or iodides, disappears entirely.

It has been claimed that where a great many cells, presenting the appearance as if they were forming spindle cells, are found, this would be evidence of a syphilitic neoplasm, but we do not think that this can be at present accepted as a fact, for similar pictures may be seen in other pathological processes. In such cases microscopists have to be guarded in expressing a positive opinion upon microscopic examination and it would often be advisable therefore, that the pathologist examine the patient, from whom a specimen is to be taken, as well as the clinician and, possibly, remove himself the specimen which he is to examine. In our experience it sometimes happens that a practitioner expects an opinion by the examination of material removed with the curette. As a rule there is little to be gained by an examination of the same. For instance, one might find a great many epithelial cells in various stages of degeneration as they are found in carcinoma or even an indication of a nest of epithelial cells, and still would not be justified in making a certain diagnosis; yet this examination might, in addition to other features of the case, aid in coming to a conclusion in regard to the nature of the trouble.

Medical Etiquet.

Under this title we bring among the abstracts an address by Mr. Ernest Hart, delivered before the meeting of the Medical Editors' Association at Milwaukee. The views set forth in the paper cover the ground pretty well and have our full approval; they coincide, we think, with the views upon this subject of the vast majority of the best men in our profession in this country as well as in England. We are particularly pleased with the standpoint Mr. Hart takes upon the subject of consultation with homeopaths, this standpoint is, in our opinion, the only logical one for intelligent and honest scientific physicians to take.

Influence of Light, or the Absence of Light, Upon Some of the Processes of Nutrition.

For the following article we are indebted to the *Dietetic and Hygienic Gazette.*

The question whether light has any influence in accelerating the chemical processes of the body was long ago answered in the affirmative by Moleschott and other contemporary workers, this opinion being based primarily upon the fact that animals exposed to light excrete more carbonic acid than when confined in a dark place. Further, Rubini and Ronchi found that in the case of man the amount of carbonic acid excreted through the skin was considerably greater in the light than in dark-

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ness. Speck, however, contended that this increased production of carbonic acid was not due to a direct action of light upon the metabolism of the body but was to be attributed to the influence of light upon the nervous system, especially upon the retina, whereby increased muscular movements resulted, thus leading to an acceleration of the ordinary chemical processes of the organism.

There is much literature bearing upon this and kindred points relative to the influence of light upon special phases of nutrition, but with such conflict of statements that the truth is hard to find. Graffenberger's recent contributions to the subject, however, seem especially worthy of credence since the results obtained have been worked out by the use of modern methods and with a due regard to scientific accuracy. Thus, by long continued feeding experiments on rabbits with a daily diet of known composition, accompanied by daily analyses of the urine and feces, Graffenberger found that there was no noticeable difference in proteid metabolism whether the animal was exposed to light or confined in a dark place. Very marked, however, was the change in body-weight. Thus, two rabbits confined in their respective cages, one lighted and the other dark, for forty days and fed on the same food and with equal quantities showed at the end of the period the following differences: The "light" rabbit had gained 29 grams in weight, while the "dark" rabbit had gained in the same time 129 grams. But on proteid metabolism there was no such marked difference, the amount of nitrogen eliminated during a period of eleven days by urine and feces being very much the same in both the "light" and "dark" rabbits. Further, thorough experiments on the rate of digestion failed to show any difference between the "light" and "dark animals except in the digestion of fatty foods. Proteids and carbohydrates were digested and absorbed equally well whether the animal was exposed to light or confined in a dark place, but with fats there was a marked difference; animals living in the light appear to digest and absorb the fat of the food much more thoroughly than animals living in a darkened cage.

Some years ago Aducco reported that fasting animals, especially pigeons, exposed to the light lost all of their liver-glycogen in two or three days, and died of starvation in fourteen or fifteen days, with a loss of 40 to 45 percent of their body-weight. When placed in the dark, on the contraay, starving pigeons were able to endure for even twenty-four and twenty five days without food at the time of death having lost over 50 per cent of their body-weight. Further, according to Aducco, when kept from the light, the liver-glycogen was apparently far less rapidly consumed, traces of this peculiar reserve material being found in the hepatic cells even on the fifteenth day of fasting. These statements have been often quoted as one of the most striking illustrations of the influence of light upon the nutritional processes of the body. Graffenberger, however, fails to confirm these observations. In his experiments, four rabbits were kept under observation for forty-five days, being fed upon like amounts of the same diet during this period, the only difference in treatment consisting in the fact that one pair were confined in a darkened cage, the other pair in a cage provided with windows. Analysis of the livers of these animals at the end of the period failed to show any striking differences in the content of glycogen; certainly, none that would warrant any such conclusion as Aducco's results point to. In fact, Graffenberger concludes that the formation of Glycogen in the hepatic cells is not materially influenced by light or darkness.

In plant physiology, as Graffenberger remarks, it is well known that light is of the utmost importance in the formation of chlorophyll, and as there is a close analogy between the hemoglobin of animals and the chlorophyll of plants it might naturally be expected that light would have some influence on the formation of blood in the animal organism. In order to test this point Graffenberger examined a large number of animals, nourished under exactly the same conditions except that one of each pair was confined in a darkened cage, the other in a lighted one, examining samples of their blood every ten days with Fleischel's hemometer in order to determine the relative content of hemoglobin. Without attempting to describe the details of the various examinations made, suffice it to say that the results obtained clearly show that depriving animals of light tends first to diminish the content of hemoglobin in the blood, followed on longer exposure to darkness by a distinct diminution in the total quantity of blood, thus leading eventually to an increased percentage content of hemoglobin.

Still more pronounced as showing the influence of light on the nutrition of the body, are the differences in the weight of the individual organs and tissues of the body as determined after the animals have been kept for sixteen to forty-six days in light and darkness respectively, otherwise under exactly the same conditions. These differences are clearly indicated by the following table, which is typical of many similar results reported by Graffenberger.

The animals in these four experiments were young rabbits from the same litter, Nos. I and II being exposed to the above conditions for sixteen days, Nos. III and IV for forty six days.

By a comparison of the results obtained in Nos. I and II it is seen that when an animal is deprived of light for a short time, say two weeks, the blood becomes diminished in quantity, while the bones and nearly all of the internal organs, together with the skin, show an increase in weight, which is presumably due mainly to an accumulation of fat. When deprived of light for a longer period, say six weeks, the blood shows an even greater shrinkage in volume; the heart and skin still show an increase in weight, while the bones, liver and kidneys tend to decrease in weight. As to the other organs, the results obtained are not sufficiently concordant to warrant definite conclusions. The content of water and

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solid matter in the respective organs and tissues was essentially the same in all cases.

RABBITS.	I. LIGHT.	II. DARK.	III. LIGHT.	IV. DARK.
Blood shed	24.3400	19.5025	20.0000	14.8700
Skin and Legs	75 4000	77.4200	83.7000	94.7000
Muscle	218.7900	209.6900	296 5100	304 5800
Bones	60.5800	64.4100	104.9700	92.7200
Heart	1.8352	2.0324	2 9160	3.2675
Liver	24 9790	28.3822	36.7243	34.0920
Lungs	3.4118	4.5778	4.6375	7.9950
Stomach	9.5875	12.2555	10.3100	8 9640
Kidneys	5.1751	6.0038	6.5067	4.6975
Intestines	66.7200	68.7800	79.9200	56.26.0
Eyes	3 6870	3.7400	3.9007	4.4590
Spleen	0 2330	0.4395	0 2940	0.3655
Total	494.7323	497.2427	650.3902	626.7707

Especially noticeable in all of the experiments was the marked influence of the deprivation of light upon the laying on of fat. Not only was this noticeable in rapidly growing young animals but it was even more pronounced in the case of adults; nearly all of the organs of the body tending to accumulate fat when the animal was confined in a dark place. Further, this increased production and accumulation of fat in the absence of light may become very considerable, under the most favorable circumstances reaching the proportion of 100 (light), 216 (dark). On too long exposure to darkness, however, this great increase in the amount of body-fat may lead to certain abnormalities, which in time may eventually result in a dropping off of the accumulated fat.

While much remains to be done to make clear the full effect of the presence or absence of light upon the varied processes of nutrition, Graffenberger's work marks a distinct advance and contains many important suggestions, which may ultimately bear fruit of no insignificant size.

Permanganate of Potash an Antidote to Several Organic Poisons.—Antal (*Pesth. med.-Presse, Brit. Med. Jour.*), experimentally examined the properties of permanganate of potash as an antidate to certain organic poisons, and found that those animals which muscarine, strychnia, colchicum, oleum sabina, and oxalic acid had been administered, followed by a one-half to one-third per cent solution of permanganate, recovered, whereas animals similarly poisoned, but without resorting to the above-named antidote, succumbed. The author therefore suggests its use when poisoning by one of the above substances has taken place in the human subject.

ABSTRACTS

Medical Etiquet.—Dr. Ernest Hart, of England (*Medical News*), in an address delivered before the American Medical Association, at its meeting in Milwaukee, June 5, 1893, proceeded as follows: A class of questions which give an editor frequent occupation for thought, and sometimes some passing trouble, are those known as medical etiquet. The value, the uses, and the meaning of medical etiquet are variously estimated. There are those to whom it is *fetich*, and those to whom it is *tabu*; to some it is a name of terror, to others a term of derision; some assume to hold themselves above its reach, others are obviously below it, and some outside of it; but consciously or unconsciously all are affected by it. The philosophers hold it to be unnecessary because superfluous; but it is perhaps true, however paradoxic, to say that in our complex modernity of civilization it is often, and sometimes chiefly, the superfluous that is felt to be essential. At any rate, it is chiefly our superfluities that become indispensable. The philosophers are apt to predict that medical ethics have no separate existence, apart from or antagonistic to the rules of general ethics. Far from being a reproach or a ground of retraction or a reason for abolition, that is one of its highest claims to respect, and a fair measure of its usefulness. Medical ethics are particular cases of general ethics. They constitute the bulwarks and the outer fortification of the central fortress. Do unto others as you would have them do unto you, is the golden rule which is enclosed within the casket of general as of medical ethics. But society has found it necessary to formulate a vast number of accepted laws of conduct which are none the less necessary for daily use because they may all be found inscribed in the Ten Commandments. The two hundred and forty Levitic commandments, the Gospel rules of conduct for life, and the whole code of modern legislation for the regulation of social relations, are not superfluous, because they may be traced to the simple Mosaic tablets, and to the Sermon on the Mount. In the complex relations of medical life questions daily arise involving principles upon which every man might, after due thought, decide for himself. They include applications of principle which every man might work out if his intellect were always keen, his judgment well balanced, his interests calmly self-judged and easily put aside when they conflict with the general interest. So perfect a being might be content to be a law unto himself; but for others less perfect it has been found in every walk of life that it is well to have at hand, stored in the memory or laid down for reference, decisions and rules already settled by the wisdom, the experience, and the judgment of the wisest and best of our predecessors and our contemporaries—that is, the code of medical ethics, and wise men will not despise it. Let me say in one brief sentence that many of us

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in Great Britain think it one of the highest and greatest claims to sympathy and respect of the American Medical Association, as a representative body, that it has framed and promulgated such a code and that it has made great sacrifices to uphold it. *Securus judicat orbis terrarum.*

There is one question that has from time to time cropped up in relation to medical etiquet, and that has long since been thoroughly settled with us, but as to which there is, I hear, some difference of opinion among various sections of the profession here. It may be worth while to refer to it in passing, as an illustration of the view that I have just expressed, as to the convenience of having the particular cases of medical ethics that involve some complications, carefully thought out and authoritatively settled. I am thinking, in saying this, of the question of

CONSULTATIONS WITH HOMEOPATHS.

Some ingenuity has been exerted in indeavoring to show or to suggest that the rule that prevails everywhere, and unquestioned throughout Great Britain, forbidding such consultations, is a selfish rule and contrary to the public welfare. If it were so, it would be self-condemned, for we are probably all of us here well agreed that the fundamental principle of medical ethics is that all rules laid down as part of the code are, and must be, as much for the welfare of the whole community as for the good guidance and advantage of the medical profession as a class.

The arguments that are sometimes used to indicate that the refusal of a practitioner of good standing to consult professionally with a homeopathic practitioner is contrary to the public good and a mark of illiberality and intolerance amongst regular practitioners, are a false, fabricated, specious and worthless plea. On what is the demand for such a consultation based? The only correct and sensible basis is that it should be for the benefit of the patient. It is sometimes said that, at any rate, the regular practitioner can and ought to give his assistance in determining the diagnosis of the case. But the answer to that is plain as noon-day. We are not here, nor do we enter the sanctuary of the sick-room to solve conundrums. The medical mission is to heal the sick. The physician fulfills his function only when his diagnosis is to be followed by an effective treatment. Now, we all of us have the conviction that the treatment, so-called, instituted by homeopaths as such, is absolutely ineffective, and does not and cannot, if faithfully carried out in accordance with what is known as the homeopathic doctrine and method be of any avail whatever.

Of course, it is said that very often the so-called homeopathic treatment is not carried out by homeopaths. In that case the nomenclature is itself a fraud, and we are not called upon to soil our hands by taking part in any such imposture. But we treat homeopathy and are willing to regard it as an honest delusion. If he were to accept the position of a mere solver of riddles, he would lose all that makes medicine dignified and ennobles its functions. He would be doing worse than this in entering into a consultation with a homeopath. We are entitled to assume that the homeopathic practitioner himself believes that his treatment of infinitesimals may be of some benefit to the patient. At any rate, we may feel sure that the patient entertains that delusion, and by entering into consultation over the sick-bed, the physician would ratify by his presence that understanding. The public could not understand that fine-drawn, artificial, and unholy distinction which would allow a conscientious practitioner to stand by the bedside of a man smitten with disease, trembling, perhaps, on the threshold of death, and on the paltry pretence of assisting to clear up the diagnostic difficulties of the case, to examine the patient and to leave him to the tender mercies of one who, in his heart, he believes, and who, with all his intelligence, he is convinced, is a person carrying out a system of medicine, so-called, which is absolutely incapable of affording to the patient such chances of life as the advancing inroads of disease may leave. Consultation with a homeopath, regarded from this point of view (and I know of no other from which it can fairly and worthily be regarded), is worse than a sham, worse than an imposture. It is a crime. On this head of conduct there is, I have said, no division of opinion throughout Great Britain, and any physician who should break that now well established rule would be regarded as putting himself beyond the pale of ordinary professional intercourse with his brethren; and men would refuse, and before now have refused, to consult with any practitioner who thus misinterprets the true ethics of consultation.

No ingenuity, no special pleading can set aside, so far as I have ever been able to understand the matter, the prevailing ethical rule that underlies the decision of this particular case; and it affords, I think, a very good example of the importance of not leaving every man to draw his own conclusions and to work out his own deductions from the few central prisciples, but of having at hand decisions, made deliberately and in general consultation on thorny points, which it requires some firmness of purpose and an immovable moral determination rightly to solve, without being misled by side issues. One or two eminent men, as I can recall in my early experience of journalism, allowed themselves to be misled by the specious cry of intolerance, and for a moment declared the intention of accepting, under the flag of liberality, the false position that I have indicated. It was but for a moment, and it would be unfair now to recall the name of the greatest among them, who quickly saw the error of his ways and drew back in time to save his great reputation and his spotless honor. I only refer to the matter thus briefly as indicating that for the wisest and greatest among us is true that the honor and the esteem of the mass of the profession are likely to be surer guides than the acute intelligence of a few, although among these there may be those whom we delight to honor as leaders of the profession.

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A strict adherance to the rules of etiquet is sometimes, with shallow scorn, stigmatized as trades-unionism. We can be well content to leave that phrase as it stands, but let us translate it into its proper language. Medicine is not a trade; it is a profession. And unions such as oure, such as yours, unions which are called the Association of Medical Journalists, or which are called the American Medical Association or the British Medical Association, typify and embody professional union. We accept and convert to our own honor and dignity and to the welfare of the public, the very phrase which is hurled at us as if it were a reproach. Yes, we here are all for medical union. Our duty as medical journalists is to promote professional union, and it is one of the great titles of the American Medical Association to honor, one of its great titles to the respect and the esteem of the profession in this country and in Great Britain, that on this matter of consultation with homeopaths it has chosen the straight and narrow path—that it has declined to be drawn off by the blandishments of those who offer a crown of liberality which looks flowery enough, but which is quickly shown, when it is handled, to be a crown of crackling thorns—one which, however, decorated with the blossom of public applause, pierces the very substance of professional honor and duty. It is the liberality of a Gallio which we are invited to accept as our ensign, but which the American Medical Association and the British Medical Association are unanimous in scornfully rejecting.

The voice of the profession has been and is in the end the surest judge of right. In all such questions of general conduct and universal rights, it is the rank and file of the profession with whom lie the duty, the power and the privilege of decision; even in the face of opposition from those whom we delight with the title of leaders of the profession.

The Therapeutics of Cholera.—There is yet no method of treating cholera of which in a given case it can be definitely predicted that it will lead to recovery (*Medical News*). If a specific for cholera exist, it is yet to be discovered. With a correct knowledge of the etiology of the disease and a proper appreciation of the processes that attend it, we are, however, in a position to intelligently apply the lessons of experience and to analyze the results of a rational empiricism, controlled by demonstrated and demonstrable physiologic and biologic data.

Within the last nine months there have from time to time appeared in the *News* numerous articles and abstracts dealing with the various phases of cholera. It is our purpose to-day to indicate those therapeutic measures that recent experience has demonstrated to be deserving of the greatest confidence should the necessity for their employment arise.

The administration of opium for the control of the diarrhea has resulted in almost universal disappointment. The reason for this becomes apparent when we consider the indication to be met. The object to be attained is not the checking of intestinal peristalsis, with the attendant retention of the infectious cause of the disease and the products to which it rapidly gives rise; but, on the contrary, the destruction or the expulsion of the bacteria and the neutralization or elimination of their toxic contents or products. For the purposes last named calomel has proved the most efficient agent. A single large dose may be given early. Small doses given repeatedly at a later period exert a useful influence in allaying irritability of the stomach and controlling vomiting.

Salol, from which at first much was expected, has also disappointed; and there is little reason to expect better results from other purely antiseptic agents, such as naphthaline and the napthols. Hueppe (*Berliner klin. Wochenschr.*, 1693, No. 7, p. 162), however, reports satisfactory results from the employment of tribromphenol, especially in mechanical combination with bismuth Of such a preparation he administered an initial dose of fifteen grains, followed by doses of $7^1/_2$ grains every two hours during the day and every three hours during the night, for a period varying from two to five days, when the dose was diminished.

It was hoped that tannic-acid enteroclysis would prove useful in neutralizing the poison generated by the cholera-bacilli within the bowel. While this hope was not literally realized, the injections rendered good service by reason of the heat and water, by their use, supplied to the body; as a matter of fact, the quantities of fluid employed (about two quarts) were not sufficient to reach beyond the ileo-cecal valve, conceding this to be passable by fluids injected into the rectum. The good accomplished by means of subcutaneous infusion of a physiologic (0.6 per cent) saline solution (hypodermatoclysis) is likewise to be ascribed to the heat and fluid supplied. In a large number of cases of grave type and in the algid stage marvellous results (that were, unfortunately, only too often of but transitory duration) followed intra-venous infusion of the physiologic solution.

The four measures thus far named—calomel, enteroclysis, hypodermatoclysis and intra-venous infusion—have proved themselves worthy of confidence and deserving of further employment in the treatment of cholera. What may be expected from biologic measures cannot yet be determined. Most of the studies in this direction seem to indicate that not much can be hoped for in the treatment of the established disease. It would appear as if the intoxication is so profound and so rapidly established that antidotes are unavailing unless given in the incipiency of the infection, *i. e.*, at a time when the diagnosis is scarcely possible. Whether or not protective inoculation, by strengthening the natural immunity, shall prove useful remains to be demonstrated. In the limited number of cases in which the anticholerin of Klebs has been employed the results were comparatively favorable, but this method of medication is still in the experimental stage, and its place

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in our therapeutic armamentarium remains yet to be decided.

In a number of cases hot baths have been advantageously availed of in the algid stage; but, on the other hand, the fear is expressed that by the diversion of the blood to the surface of the body heart-failure may result.

What are the Indications for Abdominal Section in Intra-Pelvic Hemorrhage? — M. Rosenwaser, M. D., Cleveland, O., read before the American Association of Obstetricians and Gynecologists at Detroit, June 3, 1893, a paper on this subject, from which we abstract the following: (The paper will be published in full in the July number of the Annals of Gynecology.)

Sufficient clinical evidence has now accumulated to demonstrate that a differential diagnosis between extra and intra-peritoneal Hematocele cannot be made. It is therefore suggested to divide intra-pelvic hemorrhage into free and circumscribed. We control the former by abdominal section, how shall we manage the latter? Ruptured tubal pregnancy has in most cases been found to be the cause of both varieties, hence the tendency of those entertaining advanced views to treat all intra pelvic hemorrhages alike — by section — as the shortest and safest way out of a serious dilemma. The fact that circumscribed pelvic hemorrhage is quite common, and that cases often recover without operation, and that it is quite possible to distinguish and separate cases requiring operation from those likely to get well by rest alone, makes the author doubt the propriety of promiscuously throwing all into one group, subject to abdominal section. Only cases giving evidence of infection or of continued growth of tumor, or of interference with vital functions by pressure, or of secondary rupture are properly subject to operative treatment.

A table of sixteen consecutive cases of circumscribed pelvic hemorrhage is submitted and analyzed to substantiate the views expressed. There was a definite indication for operative treatment in but six cases. Of the remainder nine recovered by rest and one was operated at her own urgent request. Her recovery was uneventful, but she now has a ventral hernia. Guided by his own experience, the writer would advocate vigilant delay, until the operation is definitely indicated.

The so-called advantages of early section lose all value when operation is unnecessary.

1. As to control of hemorrhage.—Section is uncalled for when hemorrhage has ceased and the mass is shrinking. Final absorption is effected by rest in bed. Secondary rupture is rare, and the danger arising therefrom is offset by the danger incident to unnecessary operation.

2. As to removal of debris.—As nature successfully disposes of the debris in at least 60% of these cases only a minority will require operation in the event of suppuration or of Pressure Symptoms.

3. As to removal of ruptured tube.—The appendages, in cases recovering without operation and in those treated by vaginal incision, are not touched, and even in cases treated by abdominal section, they are frequently so buried by adhesions that they are left undisturbed —no harm following.

4. As to safe and speedy recovery.—Though the risk of death by operation be but a fraction, the danger of chronic invalidism from ventral hernia, intestinal adhesions and, rarely, from fecal fistula, ought be sufficient to deter one from operating for the sake of speedy recovery. The writer offers the following conclusions:

1. Intra-pelvic hemorrhage may be free into the peritoneal cavity, or primarily or secondarily circumscribed by true or false membranes.

2. Though nearly always due to ruptured ectopic pregnancy, the same surgical principles underlying the treatment of other similar hemorrhages are applicable in intra pelvic hemorrhage.

3. Such treatment must therefore vary according to the conditions dependent primarily on the hemorrhage, and secondarily on the original cause of the hemorrhage; hence,

4. To prevent free intra-pelvic hemorrhage abdominal section is indicated in all cases of presumably recognized unruptured tubal pregnancy either as prophylactic, or for the purpose of removing pathological conditions not otherwise curable.

5. In all cases of free, intra-pelvic hemorrhage, from whatever cause, early or immediate section is the only safe means of averting a fatal termination.

6. In circumscribed, intra-pelvic hemorrhage section is indicated for removal of increasing blood clot and debris, whether due to recurrent bleeding or continued growth of fetus.

7. In circumscribed, intra-pelvic hemorrhage section is necessary whenever the symptoms indicate decomposition of the blood clot. Lastly,

8. Section is also indicated whenever the pressure of the circumscribed blood-mass produces obstruction of the bowel.

Progressive Muscular Dystrophy with Hysteria.—Erb (*Neurol. Centrlbl.*, March 15, 1893) reports the following case: A carpenter, aged 26, without neuropathic or myopathic heredity, subject to vertigo, headache, and fainting fits from the time of puberty noticed commencing atrophy and weakness in the right shoulder and arm muscles a few weeks after falling from a height of about 3 feet while at work. The accident did not disable him at the time—December, 1890—nor cause any trouble beyond slight swelling of the right shoulder. Two or three months subsequently atrophy and diminished power were observed in the corresponding muscles of the left side. When received into hospital in November, 1892, there was great wasting of the arm and shoulder musculature of each side, more advanced in the right; the right extensor carpi radialis, the dorsal spinal extensors, and the muscles of the right thigh were affected to a slight degree. Fibrillar tremor

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and R. D. absent. Deep reflexes were very feeble in the upper limbs. The whole of the right half of the body from the vertex to near the foot was hypalgesic and showed defective temperature sense; further there was anosmia on this side; no other sensory anomaly. Vasomotor excitability of the cutaneous vessels was greatly increased over the whole surface (dermogra phia); both hands were livid and cold; their epidermis dry and fissured. The author points out that the motor symptoms indicated progressive muscular dystrophy; but their combination with dissociated hemi anesthesia raised the possibility of syringomyelia. Against the latter he placed the absence of pain and paresthesia and the implication of the trigeminal area without bulbar symptoms. He concluded that the anesthesia was of hysterical type, especially as the patient was unconscious of the defect until it was dis closed by examination. This diagnosis was verified by the effect of electrotherapy; in a few weeks the sensory disorders entirely disappeared.—*Brit. Med. Jour.*

Electro Therapeutics and Suggestion Therapeutics.—(*Review of Insanity and Nervous Diseases*). Moebius has thrown a bomb into the camp of the German electro therapeutists, in the shape of five theses in which he denies very broadly that electricity has any curative qualities *per se* (*Boston Med. and Surg. Jour.*). He claims that in eighty per cent of all cases in which its action seems beneficial, this is due to its psychical not its physical influence.

Eulenburg has undertaken to answer Moebius' objections. In regard to the first point, that it has not been proven that electricity has a curative action on organic paralysis, and that paralyses which improve under electricity would do so without it, Eulenburg points out that the recovery would be slower and not so complete, and asks whether the results obtained in paralyzed animals are due to suggestion.

Moebius' second and third theses are: that many functional troubles are relieved by electricity and also by suggestion, *ergo*: electricity acts by influencing the mind only.

Eulenburg points out these troubles are also relieved by morphine, atropine, bromides or arsenic, and asks whether these, too, act psychically, as well as massage and hydro-theraphy.

The fifth thesis declares that the extreme variation in action of electricity, both galvanic and faradic, can only be explained by assuming that it acts by influencing the mind of the patient. Eulenberg points out that we are dealing with vital process and not with dead material, and that we cannot predict the action of such well-known drugs as morphine and chloral in all cases. While combating Moebius' heresy in regard to the action of electricity, Eulenburg admits that Moebius has done a good work in pointing out the uses and benefits of psychotherapy, and calls attention to the facts that electricity as administered by the non-expert physician, is liable to be the failure that Moebius has described, and that general knowledge of its therapeutic application has not kept pace with the distribution and improvement of the electric armamentarium.

MEDICAL SOCIETIES

American Medical Association.—We are indebted to the *Journal of the American Medical Association* for the following interesting report of the Section of Surgery and Anatomy, at the meeting, held on June 8 and 9, 1893, at Milwaukee, Wis.

Brain Surgery.

Dr. F. C. Schaeffer, of Chicago, read a paper on this subject. He operated eight cases, which demonstrated the importance of carefully examining every case of injury and of prompt surgical intervention in all instances in which a fracture is detected, even if there be no symptoms indicating intra cranial involvement. In one case, in a man fifty years of age, in which there was most extensive fracture of the anterior fossa of the skull and of the frontal bone, the patient walked a distance of a mile to his home. When first seen there were no symptoms whatever of any cerebral disturbance. As the wound involved the frontal sinus, it could not be determined that the injury had fractured the internal table. Although operation was advised on general principles, as the family refused, it was not pressed, and the wound was treated antiseptically.

Artificial Opening of Pulmonary Cavities; Insertion of Rubber Tube and Injection of Chlorine Gas.

Dr. E. L. Shurley, of Detroit, Mich., read a an article on this subject. He said that, although pulmonary cavities have been opened artificially occasionally since 1847, the procedure has only recently been recognized as a justifiable one. Dr. Shurley proposes the additional injection of diluted chlorin gas into the cavities at intervals of three or four days, at least. The gas is obtained by half filling a Wolff bottle with fresh chlorin water and forcing air through this into the pulmonary cavity. Gaseous substances should be used in preference to fluids, as the former penetrate the pulmonary substance better, are not irritating, and do not produce cough. Of all gaseous bodies, Dr. Shurley prefers chlorine.

The Present Status of Thoracic Surgery.

Dr. J. McFadden Gaston, of Atlanta, Ga., read a paper on this subject. The following general inferences were held to be justifiable:

1. All penetrating wounds of the thorax may be closed hermetically by suture after allowing the discharge of fluid blood from the opening.

2. Foreign bodies lodged in the bronchi may be removed by incision of the trachea at the lowest available point.

3. Experiments for reaching the branchi through the chest-wall afford little encouragement in undertaking operation upon the human subject.

4. Medication as a preventive and curative agency in

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pleuritic effusion is worthy of trial before recourse to operation.

5. Aspiration is indicated when there are large serous accumulations, and likewise in pneumothorax, but cannot be relied upon for the relief of purulent collections.

6. Partial resection of ribs is attended with better results in some cases of empyema than the complete removal of the segments of several ribs.

7. The excision of a small portion of one rib, with the introduction of drainage-tubes, has been generally attended with good results.

8. Washing out the cavity of the chest is not requisite, except in case of contamination and decomposition of the contents.

9. The operation of thoracotomy for abscess and gangrene of the lung should be accompanied with antiseptic applications and with gauze tamponage.

10. Tumors of the mediastinum, admit of interferference, but further improvements are requisite.

Tumors of the Neck.

Dr. William L. Rodman, of Louisville, Ky., read an exhaustive paper on this subject. The various cysts of the neck were considered. Of these, those connected with the thyroid gland are quite common. In the treatment of these, Kocher recommends partial excision of the gland. Total excision leads to the cachexia strumipriva. In eighteen cases of total extirpation observed by Kocher, but two failed to develop the cachexia; while of twenty-eight partial excisions, none exhibited any untoward after-effects.

Lymphomata are by far the most frequently observed tumors of the neck. Of malignant disease, sarcoma is more common than carcinoma. Sarcoma of the neck, unless seen early, does not seem to offer satisfactory conditions for operation. The growth is vascular, the attachments many, and the danger of recurrence great

Tuberculosis of the glands of the neck is exceedingly common. The submaxillary glands are almost invariably the first affected. The infection spreads through the lymphatics and involves other glands. It was recommended to remove such glands in every case, as they may lead to general infection, an event that does occur in at least one case in eight.

Dr. MacLean, of Detroit, prefers the tapping of hydroceles of the neck and injecting with iodin, as in hydrocele of the tunica vaginalis testis.

Dr. Mudd, of St. Louis, agreed with Dr. Rodman in preferring excision of cysts of the neck unless there be some valid contra indication.

The Relative Merit of the Present Methods of Treating Pyelo-Nephrosis.

Dr. Joseph Price, of Philadelphia, read a paper on this subject. He said that when the patient cannot stand a prolonged operation, incision and drainage should be employed. If there remains any secreting structure of the kidney, it is well to perform nephrotomy, as the possibility of a horseshoe kidney, should be borne in mind. In this event, removal would result in speedy death from uremia. In the surgery of the kidney, as elsewhere, the simplest procedure that will meet the indications should be employed.

Dr. Price related that he had performed incision, irrigation, and drainage in seven cases without a death.

The Surgery of the Ureter.

Dr. Weller Van Hook, of Chicago, presented a very valuable paper on this subject. The fact that the ureter is sometimes injured during abdominal and pelvic operations led the author to devise a means of uniting the divided ends. One end is ligated, a longitudinal incision made above the ligature, and, by means of two threads, the other end is invaginated into the longitudinal incision. The opposed portions are carefully united, and, if desired, covered with a flap of peritoneum to make the union more perfect.

It is recommended, when it is desired to implant the ureter in the bladder, that the ureter be first stitched in the abdominal wound, and later, the bladder stitched as high as possible in the abdomen; and when adhesions have become firm, the ureter may be implanted in the bladder, with considerable hope of entire success. This necessitates three sittings to complete the operation, but the results would seem to justify the method.

Dr. Hook objects to implantation of the ureter into the rectum. Among other objections are the occurrence of ureteritis and pyelitis.

The extra peritoneal or retro-peritoneal method of attacking the ureter is recommended when possible. The following general considerations were presented:

The extra-pelvic portion of the ureter is most readily and safely accessible for exploration and surgical treatment by the retro-peritoneal route; hence all operations upon the ureters above the crossing of the iliac arteries should be performed extra-peritoneally, except in those cases in which the necessity for the ureteral operation arises during celiotomy. The intra-pelvic portion may be reached by incision through the ventral wall, the bladder, the rectum, the vagina in the female, or the perineum in the male. The ureter is not only exceptionally well protected from injury, but by its elasticity and toughness resists violence to a remarkable degree. The histology of the ureters furnishes most favorable conditions for the healing of wounds. Longitudinal wounds of the ureter at any point heal without difficulty, in the absence of septic processes and under the influence of ample drainage. In all injuries, when the urine has been septic before operation, or when the wound is infected during the operation, drainage must be effected posteriorly. The chemical composition and the reaction of the urine should be studied in all injuries of the ureter, the urine being rendered acid, and the specific gravity kept low. The pelvis of the ureter is, *caeteris paribus*, the most favorable site for wounds of the ureter, as scar-contraction is not likely there to be productive of ill-results. In aseptic longitudinal wounds of the ureter, occurring in the course of celioto-

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my, suture may be practiced, as recommended by Tuffier, and the peritoneum protected by suture. Transverse wounds of the ureter involving less than one-third of the entire circumference of the duct should be treated by free extra-peritoneal drainage, and not by suture. In transverse injuries in the continuity of the ureter involving more than one third of the circumference of the duct, stricture by subsequent scar contraction should be anticipated by converting the transverse into a longitudinal sutures. In complete transverse wounds of the ureter at the pelvis, sutures may be used if the line of union be made as great as possible. In complete transverse injuries of the ureter in continuity, union should not be attempted by suture. In complete transverse injuries of the ureter in continuity, union with subsequent scar-contraction may be obtained by lateral implantation as described. In complete transverse injuries of the ureter very close to the bladder, the duct may be implanted, but with less advantage, into the bladder directly.

In transverse injuries of the ureter with loss of substance, the following conclusions were formulated:

At the pelvis of the ureter, continuity may be restored by Kuester's method of suture, provided the severed ends can be approximated. Rydygier's method of ureteroplasty in such injuries should be tried, if sutures cannot be utilized. The primary operation should at least fix the ends of the tube as nearly together as possible. In both trans-peritoneal and retro peritoneal operations the uretsral ends can be approximated, even after the loss of about an inch of substance. The use of tubes of glass and other materials for the production of channels, to do duty in place of destroyed ureteral substance, is rarely successful, and even if temporarily successful the new duct is almost sure to be choked by car-contraction. The implantation of the cut ends of a ureter into an isolated knuckle of bowel is objectionable:

1. Because the bowel is not aseptic.
2 Because the operation is dangerous.

In injuries of the portion of the ureter within the pelvis, with loss of substance, the ureter should be treated as follows:

If possible the continuity of the ureter should be restored by lateral implantation. If this is not possible, he ureter in vaginal operations, particularly in vaginal ysterectomy, should be sutured to the base of the bladder. with a view of a future vesical implantation or formation of a vesico-vaginal fistula with kolpokleisis. In injuries to the pelvic ureter during celiotomy, when the continuity cannot be restored, and when vesical or vaginal implantation cannot be effected in the female, or vesical implantation to the male, the proximal extremity of the duct should be fastened to the skih, at the neerest point to the bladder arch. In such cases; as well as in ventral ureteral fistulæ due to other causes, the bladder may be distended and sutured to the abdominal peritoneum and muscles as high as possible, and at a second operation the ureter may be implanted extra-peritoneally into the bladder. If the ureter will not reach the bladder, a flap of bladder-wall may be cut out extra-peritoneally and reflected upward to meet the ureter and form a tube. It is legitimate under such circumstances to try Rydygier's method.

Implantation of one or both ureters into the rectum is absolutely unjustifiable under all circumstances, because:

1. The primary risk is too great.
2. There is great liability to stenosis at the point of implantation.
3. Suppurative uretero pyelo-nephritis is almost absolutely certain to occur.

Ligation of the ureter to cause atrophy of the kidney is unjustifiable. Extirpation of a normal kidney for injury or a disease of the ureter is absolutely unjustifiable, except when the ureter cannot be restored in one or other of the many ways cited.

Analysis of 125 Cases of Hernia Operated on for the Purpose of Radical Cure.

Dr. Henry O. Marcy, of Boston, read an analysis of 125 cases of hernia operated on for the purpose of radical cure. The paper was addition to former communications by Dr. Marcy on the same subject. A continued experience and observation have confirmed the opinion formed many years ago that the army of truss bearing sufferers will constantly grow less and less as cases of hernia are subjected to proper operative procedures. The mortality of radical operations for hernia in good hands is very small, and the proportion of cures is very creditable.

Dr. Donald MacLean, of Detroit, reported two cases of

"Traumatic Aneurism of the Common Femoral Artery, with Ligature of the External Iliac Arteries."

On account of the position of the aneurism, and the numerous and important branches that the femoral artery gives off, Dr. MacLean departed from the treatment generally followed and ligated the external iliac artery, with recovery in both cases.

Dr. D. J. Hayes, of Milwaukee, related two cases in which he had operated for

"The Establishment and Maintenance of a Urethra Above the Symphysis Pubis in Chronic Prostatic Obstruction."

The operation, first advised for this condition by Dr. Hunter McGuire, is to be strongly recommended on account of the ease of its performance, and the very satisfactory results. One patient was exhibited. He could retain his urine for from four to five hours, and was attending to business. Dr. McGuire has performed suprapubic cystotomy for prostatic obstruction in over ninety cases, with but two deaths, and in both of these instances there was preexisting pyelitis.

Dr. H. C. Dalton, of St. Louis, read a contribution on

"Three Cases of Traumatic Rupture of the Small Intestine, with Early Operation."

One case died. In this instance operation was delayed too long. Both of the other cases recovered satis-

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factorily, The deduction drawn from the report was that in these cases immediate operation is necessary.

Dr. Howard A. Kelly, of Baltimore, made some interesting remarks upon

"URETERECTOMY,"

upon which subject he has recently done so much original work. Numerous photographs were exhibited, showing the incision and various steps of the operation. The term ureterectomy is employed to indicate total or considerable extirpation of the ureter. The operation becomes necessary in cases of malignant disease and other conditions. The ureter may be reached in any one of many ways. Dr. Kelly operates with the patient lying on the side opposite that on which the operation is to be performed.

Dr. Link, of Indiana, showed specimens exhibiting the formation of bone after the periosteum has been destroyed.

Dr. J. N. Quimby, of New Jersey, reported the case of a boy in which, a few hours after receiving a blow upon the head by a stone, convulsions supervened. After consultation it was decided to trephine. There was so little disturbance of the external table that trephining was almost abandoned, but a button of bone was removed and the internal table was found much de pressed and splintered. Recovery was complete and permanent.

Dr. Alexander Dallas, of New York City, read a paper on

"A NEW TREATMENT OF HERNIA."

He has devised a new form of truss, consisting of a covered steel spring, which is adapted to the body over the iliac crests, the anterior arm descending almost vertically and covering the entire inguinal canal. The advantages claimed for this appliance are perfect retention with the least pressure, comfort in wearing, and stability in proper position.

For the cure of hernia, Dr. Dallas has devised an instrument which is passed through a small cutaneous incision over the external ring into the abdomen, and, by means of a screw, a toothed surface is protruded, the canal freshened, and the instrument withdrawn. The external opening is closed with iodoform-collodion; a truss is worn for three weeks, and removed.

In cases of strangulated hernia it was recommended to employ hypodermatic injections of morphine and atropine about the hernia every fifteen minutes until the patient is comfortable. Operation, if finally necessary, may be performed under morphine narcosis.

For the radical cure, a modification of Macewen's operation was advised.

Dr. Ernest T. Tappey, of Detroit, reported

"A CASE OF SUCCESSFUL END-TO END SUTURIEG OF INTESTINE."

When the patient, a man of forty years, with a strangulated hernia for five days, first came under observation, the sac and hernia were gangrenous. The sac had already been opened by a physician. One week after admission, when a line of demarcation had formed between healthy and unhealthy tissue, the adhesions were separated, a fresh section made, and end-to-end approximation of the bowel performed and maintained by suture of the mesentery, mucous membrane, and, finally of the serous surface. The external wound was packed with gauze. Recovery was complete without complication.

"A NEW APPLICATOR FOR INTRODUCING MEDICAMENTS INTO THE URETHRA, UTERUS, AND RECTUM"

was described by Dr. A B. Kirkpatrick, of Philadelphia. The instrument is made of aluminum, silver, or hard rubber, and consists of a cylinder about eight inches long, with an accurately adjusted piston. The desired amount of powder is taken up into the cylinder, and the oiled instrument is passed into the urethra or uterus to the proper distance, when the pencil of powder is projected by tne piston.

In acute gonorrhea, Dr. Kirkpatrick has found a powder of iodoform, boric acid, morphine, and atropine, introduced by this applicator, almost a specific.

Dr. Joseph B. Bacon, of Chicago, Ill., described

"A NEW METHOD OF TREATMENT FOR STRICTURES OF THE RECTUM."

The operation consists in performing celiotomy in the Trendelenburg position. The rectum is exposed and the male half of the Murphy button is introduced into the sigmoid end, and the female half introduced on a staff through the anus and to the proper position in the rectum, an anostomosis thus being made around the strictured portion. If the stricture is less than two inches from the rectum, it is necessary to remove the coccyx in order to reach the seat of trouble. In applying the button, the portion in the sigmoid is sutured, but in the rectal half, a small opening is made in the bowel-wall, and the cylinder crowded through and the button clamped.

Dr. Verrity, of Chicago, read a contribution on

"COMPOUND FRACTURES OF THE SKULL,"

illustrated by drawings. It was recommended to trephine compound fissured fractures, even without depression or without symptoms, for the purpose of providing drainage in case of infection, and of examining the inner table.

Dr. Edward A. Tracey, of Boston, Mass., described

"A NEW MATERIAL FOR SURGICAL SPLINTS AND JACKETS AND A METHOD OF APPLYING IT."

The material employed is wood pulp. It is prepared in sheets, and from these suitable patterns are cut. These are made pliable by being moistened, and are then applied, being secured by a roller bandage. After a few minutes the splint is removed and allowed to dry. As a hardening material potassium silicate suits best. A solution of dextrin also answers well.

Ataxic Paraplegia.—Dr. L. Stieglitz presented a man, aged forty years before the New York Neurological Society who had been under observation for a year past. He had first complained of weakness and paresthesia in the lower limbs. The knee-jerks were greatly increased; there was pronounced ankle clonus, with slight ataxia, slight Romberg symptom, and some paresis on the right side of the face. His condition remained about the same for a few months. Last December the ataxia of the lower limbs became more pronounced and the upper limbs were also affected; the sensory disturbances had increased. All these symptoms had steadily progressed. There was now also slight disturbance of the functions of the bladder. The thermal ense had been lost. The speaker presented the case as ne of sclerosis of the lateral and posterior tracts (ataxic paraplegia) with involvement of the right facial nerve.

Some Considerations Concerning Genito-Urinary Neurology.—Dr. Thomas H. Burchard read a paper on this subject before the New York Neurological Society. He stated that the intimate connection, anatomical and physiological, that existed between the general nervous system on the one hand and the genito urinary system on the other found a counterpart in the reciprocal manifestations of these systems under conditions of disease. Diseases of the brain, the spinal cord, or the sympathetic produced corresponding disturbances in the genito-urinary system, and conversely, diseased conditions of the uterus, ovaries, bladder, prostate, and external genitals were not infrequently the cause of serious nervous disease. The extent to which the brain was susceptible to genital irritation was, of course, largely a matter of conjecture. That inordinate sexual indulgence, particularly during the period of adolescence, might seriously weaken the system by sapping its vitality, would doubtless be admitted. Even here, however, and especially among the insane, the sexual manifestations were essentially symptomatic, and must not be regarded as causative. The important point was that long continued irritation of the genito urinary system, and quite independent of sexual indulgence, was capable by itself of producing insidious and profound nervous disease.

Short histories of three cases were then read as illustrating the proposition that it was possible for irritation of the genito-urinary system in either sex to produce the highest forms of reflex nervous and cerebral irritation. In many diseased conditions of the nervous system a painstaking and thorough investigation would carry the diligent neurologist into an exhaustive examination of the pelvic viscera and the genital apparatus.

He said he had yet to see any disease of the genito-urinary organs that of itself was capable of giving rise to distinct and profound nervous disease unless the patient was predisposed either by heredity or by some acquired condition. In the three cases presented by him the patients had all been more or less broken down and hysterical.

NOTES AND ITEMS

Women and the Harvard Medical School.—The Faculty of the Harvard Medical School at their last meeting voted, by a majority of twelve to nine, not to ask the corporation of the University for authority to admit women to graduate courses if at any time or in particular cases it should wish to do so.

Saccharine Urine after Parturition.—In the urine of all the nursing women, sugar is present to some extent. Dr. McCann (*Brit. Med. Jour.*) found the greatest amount on the fourth and fifth day. The average quantity is about one and a half grains to the ounce. With the cessation of lactation the sugar disappears.

McGill University, Montreal.—The chair of pathology and public hygiene in the medical school has recently been endowed by a gift of $100,000. The donor, who is also the chancellor of the University, is Sir Donald A. Smith. About ten years ago he inaugurated an era of benevolence in favor of medical teaching in Canada by making a semi-centenary donation of $50,000. Other funds have flowed into the same coffers during the last year, of which $60,000, from Dr. Molson, has been set apart for a building fund for the chemical and pathological departments. Dr. Adami, formerly of the University of Cambridge, has been inducted into the chair of pathology and hygiene.

Tusculum is the name of a new educational periodical published by the Rugby Academy of Philadelphia (*Record*). It is intended as a guide to the teaching of Latin and Greek as they should be taught, *i. e.*, colloquially, and to judge from the first number it is admirably adapted to this end. If Latin or Greek is ever to become the language of science, it will have to be taught colloquially just as French and German are now taught, and until a knowledge of one or both of the ancient tongues is so imparted to the student we can never hope to see either adopted as a medium for scientific expression. Any who are interested in the proper study of these grand old languages would do well to look into the Rugby system of teaching them.

The Cremation Question in Germany.—The question of the legislation of cremation has been debated in the German Reichstag (*Brit. Med. Jour.*). The subject was introduced by Herr Lingens, a member of the Centre, who expressed his regret that the Hamburg Senate had removed the previously existing restrictions as to that method of disposing of the remains of the dead, which he described as repulsive to Christian feeling. The speakers who followed Herr Lingen, however, including representatives of the Freisinnige party like Herren Schroeder, Goldschmidt, Baumbach, and Dangerhans, besides the National Liberal Herr

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Endemann and the Socialist Herr Frohme, argued strongly in favor of cremation, especially during the prevalence of epidemic diseases. Herr Baumbach gave notice that on the debate on the proposed new law for the prevention of epidemics, he would move the adoption of a clause making cremation optional throughout the German Empire. The debate seemed to show that the feeling of the Reichstag generally is in favor of cremation.

New Studies with Old Results.—Dr. Engelman, of St. Louis, recently announced in the *Medical Fortnightly* that he had obtained as results of his recent studies in faradism, among others, the fact that "rapidity of vibration is a hitherto entirely neglected element;" that "interruptions of far greater rapidity than hitherto known, up to 50,000 or 100,000 per minute, secure seda tive, not to say anesthetic, effects hitherto unknown;" and that "all important is the exact determining of the number of interruptions used."

Honor to whom honor is due, and we are sure that no one more than Dr. Engelman will be glad to learn that the exact ground he has covered, and the exact conclusions he has reached, were arrived at a year before in the same way by Dr. Hutchinson, of Providence; whose paper entitled "Electrical Anesthesia" was pronounced among those read at the meeting of the American Electro-Therapeutical Association, and who has been given full credit for what Dr. Engelmann claims as results, in Europe and America.—*Times and Register.*

The Proof of Death.—The minds of some persons are haunted by a persistent fear lest their bodies should be buried alive, a fear which is happily almost destitute of any rational excuse. The aspect of death is in every way so different from that of life that it needs no skilled inspection to distinguish it. This is the rule, and one broken but very rarely by an exceptiion. Occasionally, however, some difficulty has arisen even as regards this primary distinction. A case recently reported may be mentioned in illustration. A newly-born infant of poor vitality, whose mother died in her confindment, had, after a short time, apparently died also, and was actually coffined when a cry revealed the fact that it still breathed. Later, on the same day, the vital flicker again appeared to be extinguished, but this time the care of the medical attendant prevented the occurrence of any mistake as to its existence. It has been suggested that in order to guard against the possibility of any such disastrous oversight in future no certificate of death shall be given except after personal inspection of the deceased by a medical man. We do not know of any objection to this proposal. On the contrary it has much to recommend it. The ordinary signs of death do not require any full explanation on our part. It is worth while to note, however, that such a case as that referred to above is exactly of the kind in which especial care should be exercised as regards this matter. It is where extreme feebleness results in a state of torpar continuing perhaps for days with faint signs of life, where breath and heart beat show but an occasional indication, where the muscular power is nearly absent, as in old paralytics, and *rigor mortis* hardly to be depended on, that we seek with some anxiety for absolute proof of death. This is to be looked for in such cases, not so much in any isolated sign as in the association of several to the exclusion of all vital manifestations. Among the most reliable indications that life is extinct we would mention rigidity, cadaveric discolorations in relation to position and surface pressure, and as an early and almost certain sign the glary eyeball, with its pupillary aperture fixed in dilatation.—London *Lancet.*

The Opaline Tongue of Influenza.—According to the *Lancet's* Paris correspondent, M. Faisans maintained at a recent meeting of the Societe Medicale des Hopitaux that an examination of the tongue was enough to settle the question, often a puzzling one, of whether or not a case was one of influenza. The tongue in la grippe was described by him as of normal size and form; always moist, unless some inflammatory complication was present or imminent; smooth and even, the papillæ not prominent. "But the chief characteristic feature of the tongue," the account goes on to say, "is its color—it is the opaline tongue. This opaline coloration is sometimes uniformly spread over the whole lingual surface; in other instances the middle and the base are opaline, the edges and tip being covered with distinct rounded opaline or bright red spots. This pathognomonic appearance may be often noted from the first onset of the disease and may persist for a more or less prolonged period after recovery. Purgatives and emetics do not modify it in any degree."

The Operative Treatment of the Hypertrophied Prostate.—Belfield, in an article on diseases of the prostate (Morrow, A System of Genito-Urinary Diseases), states that about 150 cases of radical operations upon hypertrophied prostates, are on record; that in about three quarters of these the power of voluntary urination (which had previous to operation been partially or wholly abolished) was restored.

The mortality of prostatectomy is placed at thirteen per cent.

The author advocates the suprapubic method of operation combined with a perineal incision, in order to secure the removal of that portion of the prostatic growth which so frequently extends into the prostatic urethra, as well as the lateral or intravesical parts of the gland which obstruct the urinary outflow.

The author advises that the radical operations be performed when appropriate at an earlier period of the disease than it is customary to do them. The palliative operations by drainage (perineal or suprapubic) are advocated for those patients who are too debilitated at the time of seeking relief to support the greater strain of a radical operation.

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What is an Expert?—The Supreme Court of Illinois gives a definition of a medical expert which is so matter-of-fact that we take pleasure in reproducing it for the benefit of our readers (Brooklyn *Medical Journal*). The Court says: "A practicing physician who is shown to be a graduate of a regular college and to have practiced his profession for many years, is competent to give his opinion upon a hypothetical question, setting forth the symptoms of a deceased person, whether the death was from the effects of arsenical poisoning, although he may not be shown to have had any case of such poisoning. A medical witness, in giving his opinion as an expert, is not confined to opinions derived from his own observation and exporience, but may give an opinion based upon information derived from medical books."

A Simple Method for the Detection of Tubercle Bacilli in the Sputum.—Dr. P. Kaufmann, of Cairo, suggests (*Ein einfaches Verfahren zum Nachweis der Tubercle-Bacillen im Auswerf*), as a simple substitute for the acids used in the differentiation of the tubercle bacilli in the ordinary methods of staining, boiling water, or water the temperature of 98° or 99° C. He suggests that the sputum be spread as usual upon a cover-glass, dried, and fixed over the flame, or in alcohol, and then stained in warm carbol fuchsin in the accepted manner. Instead, however, of exposing the preparation next to the action of some acid, the author would gently pass the cover-glass to and fro through hot water until but a faint rosy tinge remains. The tubercle bacilli retain their stain for about five minutes in hot water, and as a rule the exposure of the preparation to the water should not exceed three minutes; generally speaking, one or two minutes suffice. The preparation may be at once placed under the microscope for examination, or may be counter stained by the usual methods.

Differentiation of the Typhoid Bacillus.—G. W. Fuller, State Bacteriologist (N. Y. *Med Times*), in his report to the Board of Health of Massachusetts, gives the results of his attempts to differentiate the bacillus of typhoid fever from other forms. A comparative study was systematically undertaken of more than thirty different species of bacteria, found in the water of the Merrimac River at Lawrence, side by side with cultures of the typhoid bacillus. In the first place it became necessary to make a thorough investigation of the latter, and after prolonged investigation, it was found possible to separate it from all the forms hitherto encountered in the river water. The potato test, generally used to differentiate the typhoid bacillus from the B. Coli Communis, was found to be of no diagnostic value; while apparently unfailing tests of the former are the non-coagulation of sterilized milk into which the organism has been introduced, the non-formation or very slight formation of acid under similar circumstances, and the turbidity produced, without evolution of gas, when the bacilli are grown in Smith's solution of glucose, peptone, and common salt.

A Good Buggy Lamp is one which gives a good light in any kind of weather. Such a one is that made by R. E. Dietz Company at a remarkably low price. See ad page.

Antikamnia.—We call the attention of our readers to the attractive and distinctive Antikamnia advertisement in this number. This firm gladly sends samples free to physicians who will furnish their address.

A Road Cart is one of the most popular vehicles with the doctor and what he requires is something strong and durable. That made by D. F. Sargent includes, in addition to these qualities, elegance and cheapness. See ad page.

Cod-Liver Oil should be of the best quality, or disappointment will follow its exhibition. Messrs John C. Baker & Co. produce an oil which is actually palatable and deserves the hearty support of the profession. See first colored page.

Svapnia, or purified opium, has made many friends for itself from the fact that it does not produce the evil effects so often observed in the administration of the gum. C. N. Crittenton has made a real advance in this matter. See ad page.

The Chicago Polyclinic has proven a great success. It is rich in clinical material and the instruction afforded is eminently practical in character. It is already a formidable rival of the older institutions and is daily gaining in popularity. See ad page.

Wheeler's Tissue Phosphates is the name of an excellent preparation which is a real builder of the tissues. Since it was first made by Mr. T. B. Wheeler it has undergone ample trials and the results achieved by it have given universal satisfaction. See ad on page.

Elixir Six Iodides in Syphilis.—This remedy has been subjected to an extended trial and is found to be most efficient. In aggravated cases the cure is hastened by the hypodermic injections into the buttocks twice a week of one-twentieth of a grain of corrosive sublimate.

Lost Five Pounds—Dr. St. Parroth, of Darlington, S. C., writes that he has one patient who has taken Phytoline one week and reports the loss of five pounds of flesh without any evil effects. Write Walker Pharmacal Co., St. Louis, Mo., for literature with reference to this preparation and mention this journal.

New Urinary Test Case.—You should not fail to write to the well-known instrument house of Codman & Shurtleff, of Boston, for circulars and literature with reference to the latest inventions of surgical instruments and appliances. See their advertisement and in corresponding with them mention this journal.

Electricity is playing an important part in modern therapeutics and electro-medical instruments are among the valuable additions to the physician's armamentarium. The Waite and Bartlett Company manufactures a full line of the most approved patterns and should be consulted before purchasing elsewhere. See ad on page.

William Warner & Co., of Philadelphia, is one of the leading firms of the pharmaceutical world. The Galenical preparations emanating from their laboratories are not only reliable and efficient but are unexcelled in their elegance and and readily commend themselves. The sugar coated pills of this firm are unrivalled. See ad page.

MEDICAL REVIEW.

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ORIGINAL ARTICLES

The Influence of Child Life in the Production of Diseases in Women.

BY J. M. KEATING, M.D., OF COLORADO SPRINGS.

Read before the Colorado State Medical Society, June 22, 1893.

I have often thought, judging from my own experience, that the line which separates pediatrics from gynecology is an extremely feeble one,—if, indeed, any exists at all,—for I find that the more one studies the cases that enter the average practice of a physician the more one comes across conditions which give rise to symptoms for which relief is sought that are dependent on what are known as developmental processes.

It is very difficult to get a proper title for the remarks I propose to make to you to-day, and possibly it will be well for me to explain more at length the subject of this paper before I discuss with you its various phases. We constantly come across conditions depending upon various uterine anatomical disturbances that undoubtedly are more or less the causes of symptoms for which the patients have sought relief, and the question arises whether these changes from the normal are *congenital* or whether they have come from some cause which has acted during development, and which, by judicious training, could have been avoided. Undoubtedly, although much advice is given and a proper hygiene and general management of infants and children are understood, we are constantly confronted with the fact that very little attention has been paid to these matters by mothers and even family physicians. The wonderful changes that take place just before puberty in the sexual system of girls are totally overlooked in the artificial life which has proceeded from the natural advances in civilization, and though we are constantly endeavoring to counterbalance the evil effects of an artificial existence, by attempts at producing anatomical perfection, how often are these measures themselves not more liable to increase than to diminish the very force that they attempt to correct? Nutrition forms the basis of all proper anatomical structure, but by nutrition we do not mean spasmodic efforts at antidoting the evil influences which are constantly at work, but a nutrition which is established at the very commencement of life and which is progressive and constant and uninterrupted. Is it not possible that the constant change which has taken place in the last few years from the extreme sedentary life of girlhood, with its evil effects, to the opposite craze for indiscriminate exercise and wholesale gymnastics including calisthenics, posturing and many out-door games is productive of harm?

Let us study for a moment the appearance of the uterus at birth. It was my custom for a number of years in making post mortem examinations in infants to carefully examine the uterus, in order to determine, as far as possible in my own small experience, how many cases of congenital deformity existed which would account for the conditions that are found there after puberty. I recall none. We must remember that the pelvic cavity in the child is but slightly developed and that the uterus, like the bladder, is higher above the pelvic brim, that it is inclined forward and is somewhat ante flected; but the most marked differences which you will find by consulting Courth are noticed from age to age in the antagonism of the body to the neck. In the child, according to this author, the neck is very large, the body very small; the neck is almost cylindrical; the body is triangular, more flattened than in the adult. The isthmus is indicated at this age less by a contraction than a change of direction between the neck and the body, which gives rise to a slight anteflection of the body on the cervix. But at puberty the neck, instead of remaining cylindrical, has assumed the form of a small barrel, contracted above, tapering below, and is shorter. According to Cusco, the anterior reflection on the body and neck diminishes, owing to unequal development; it being greater on the anterior than on the posterior surface, helps to straighten the organ, leaving but a slight degree of anteflexion, or rather of inclination forward. Should anything occur in the process of development which will act upon the uterus in its infantile condition, it may alter its natural position and so be the starting point of abnormal growth, which is recognized in the adult by flexions and versions, tortions and displacements, which either constitute disease or complicate by disturbing function. It is especially to this class of cases that I desire to call your attention. believing then the majority of the so-called congenital deformities are comparatively rare, we are driven to the

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conclusion that uterine deviations from the normal, which are so common at puberty, are the results of certain processes which occur between birth and puberty—possibly as the result of interference with nature's laws. At exactly at what age those deviations are more likely to occur is a very difficult matter to decide; but the probability is that the association of mechanical means with developmental processes is more intimate at the period, just before puberty, and it is to this time, I think, that especial attention to young girls should be directed. It is surprising how few young girls one meets with who are absolutely normal at puberty in the establishment of menstruation, and if we are to believe that the menstrual function should be one free from pain, the number of normal cases is surprisingly small. The most common condition which one finds associated in the virgin with dysmenorrhea is anteflexion, and this we have, according to most authors, divided into flexions of the cervix, flexions of the body and pathological anteflexions of Schultze,—the latter a result more or less of peri uterine inflammation. The study of posterior displacements we will take up at another time. As these are nearly always pathological, hardly ever congenital, and developed as the result of morbid alteration, congenital retroflexion is exceedingly rare. I do not propose to weary you with a long article on uterine displacements, as found in young women, with special reference to their cause, the influence they have on menstruation, their prevention and their cure. If we agree that at a certain period in its development the uterus takes upon itself certain forms, which in after life are going to interfere with its proper function, it becomes us to study the method of its development and the forces which act in distorting it. According to Schultze, the word "puerile" anteflexion is preferable to "congenital," because it constitutes an arrested development which the uterus exhibits,—the type of that of a child, such as shortness of the vagina, especially of the anterior wall, slender conoidal form of the vaginal portion, the os very small and the excessive flexibility at the transition of the cervil into the body of the uterus, in consequence of which anteflexion at an acute angle is very likely to take place. The point of junction between the body and the cervix is the typical place at which flexion is most frequently found, and, according to Graily Hewitt, softness of the uterus is a powerful predisposing cause. (Geo. T. Harrison, page 1123, "Am. System of Gyn.," Vol. 2). I call your special attention to this last remark. According to the interesting researches of Roujet, it must be borne in mind that the nterus is an *erectile* organ, and that the broad ligaments are not a simple fold of peritoneum, but an expansion of the lateral portions of the uterus, or rather of its adjacent muscular fold, made up of bundles of smooth fibres with the serous folds adhering to them very closely; in fact, these bundles of fibres are found continuously in the utero sacral ligaments and the posterior folds of the broad ligaments intermingling in the stroma of the ovary and enclose the Graafian vesicals in the meshes of their net work. For more extended account of this, I refer you to the quotation from this paper. (Courty, page 45). The author observes that the movements of the uterus are also due to the morbid or spasmodic contractions of this superficial muscular layer. Courty goes on to state that this contraction is itself the starting point of the erection of the ovary and uterus, and gives us a most interesting account of how in the dead, the uterus, if found unimpregnated, will sink into the pelvic cavity and yield to every movement communicated to it; and how if the uterine veins are injected, if the pelvis be placed in hot water the uterus will straighten itself in the axis of the neck and be accompanied by marked change in size and form, becoming more convex in front but especially behind. One has only ta examine the uterus in a dead body to recognize this fact, by comparing it with the firm elastic sensation of that found in life, even under anesthesia. We all recognize the fact that normal muscular contractility is largely dependent for its energy upon good nutrition, that anemia is one of the most powerful causes of debility, and we will see at once how close the relationship must be between the tone of a healthy body in its resistance to outside influences which may cause disease. Let me now then direct your attention to what I consider one of the moft important causes of uterine displacements found at puberty. We usually find that the girls who suffer from dysmenorrhea are anemic, have outgrown their strength, have been burdened with mental forcing and deprived of fresh air and proper food—the girls who have been sedentary to their pursuits. We have here all the conditions that diminish muscular tonicity, aud all that is necessary is for the uterus to receive an impulse which will exaggerate its normal anteflexion. The mechanical pressure which is exerted first by constipation—that most prevalent condition of child life, which is carried on through womanhood,—the indigestions which produce flatulence, the occasional purgatives which act mechanically in causing pressure, the stooped position which adds its quotum, and the gradual bending of the toneless uterus, until it soon causes pressure on the bladder. Then from this latter we have the constant desire at urination, which keeps the bladder empty and acts in this way with the others at determining a flexed condition. I believe that in this way the majority of anteflexions are brought about. Of course it would occupy too much time to enter into a discussion of those cases which have perimetric inflammation and pathological changes in the uterus itself. There have been termed pathological by Schultze, in contradistinction to "puerile," which is the subject of our discussion. It is not necessary for us to dwell upon the question as to whether the dysmenorrhea of these cases is due to actual stenosis of the internal os or not; suffice it to say that in my own opinion puerile flexions, however acute in their angle, need not necessarily be accompanied by dysmenorrhea, and that therefore actual stenosis may not exist; but that we undoubtedly have associated with all the conditions of mal-nutrition,

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which are productive of this state of affairs, a hyperesthesia at the internal os which will produce a neuralgia or spasmodic contraction equal to that which would be produced by anatomical stenosis. Neuralgia is one of the accompaniments of mal-nutrition and flexions are not necessarily of themselves the cause of menstrual pain.

In a paper which I had the pleasure of presenting to you at our last meeting, I expressed this thought more at length, and I simply bring it in here to reiterate the statement so expressed. It, to my mind, has a very important bearing upon the treatment. Those of you who will glance over the first volume of Lawson Taite's book on "Diseases of Women and Abdominal Surgery" and turn to the pages on Infantile Uterus will note that the word "Infantile" is the one used for this bondition. But, as we have noted, the infantile uterus is entirely different in its appearance from the anteflected uterus found at puberty. It would be far better to drop this word altogether and use it only in those cases where the whole organ is subjected to non-development. In 1888, Dr. Arthur Johnston (Transaction Medical Gynecological Society) showed distinctly that the cervix and the body of the uterus have not merely an anatomical distinction, but distinctions of function and pathological changes, most marked; that the arrest of development in the cervix and the continuation of development in the fundus would naturally lead to a want of resistance at their junction, to be influenced by mechanical causes, is apparent. But, of course, careful discrimination has to be made between these cases and those in which absolute arrest and development have taken place in the whole organ, or that portion of it, viz., the fundus, which is especially employed in the process of menstruation and parturition. Why is it then that Lawson Tait tells us that a want of development of the uterus sufficient to give rise to menstrual trouble and be a bar to pregnancy constitutes half of his private practice and a large proportion of the out hospital practice. Certainly so large a proportion is not due to congenital deficiency, but the cause must come at a later period. He says that he has a strong and growing belief that the exanthematic diseases of childhood are largely to be charged with this result. I certainly cannot see the force of his argument, and it would indeed be an exceedingly difficult matter to prove. I believe that we have to look to a far more lasting and lingering condition to account for a process so persistent and insidious as is nutrition. The exanthemata last practically for a few days, but improper feeding starts in infancy. Want of hygiene, faulty clothing, mental cramming—(misnamed education)—extend for years. Nutrition requires blood, plenty of it and good blood at that, to make a healthy organ. I may then say that I do not believe that the word "congenital," which is attached so often to these cases when a patient first seeks advice, is at all a proper one, and that a conditiou which has arisen during a growing period,—which has resulted in more or less deformity,—can not be overcome in the majority of cases by the usual treatment which is given to it, but requires as careful a study and as persevering a course as would the development of a certain group of muscles or the straightening of a laterally deflected spine. Of course if the uterus is perfectly healthy, and for some reason or another there is some contraction of the cervical canal at the internal os and hyperesthesia of the mucous membrane, intensified in the married life, and rapid dilatation with proper treatment is resorted to, so as to permit of pregnancy, the patient may be entirely relieved for the future. The same may be said for the single woman and her dysmenorrhea, if due to this cause, may entirely disappear. But the dysmenorrhea of an anteflexion which is well marked will not always be followed by such good results under such treatment. The uterus may straighten, but it is toneless and will at once relapse. Ordinary pessaries are of no earthly use, and any treatment which is of any avail in such cases seems to me to be the one which will increase the nutrition of the organ, promote its normal erectility upon the influence of a proper supply of blood and eventually enable it to perform its function through good muscular action and an open non-sensitive canal. Modern treatment, used by many, is etherization, rapid dilatation, copious hot water irrigation and possibly glycerine tampons, or a pessary of some sort. The uterus is depleted, weakened by this means. To be sure, the spasm is temporarily overcome and the patient, relieved for the time being, but soon finds that the relief is only temporary, seeking advice elsewhere, starts on her round from one doctor to another. Violent exercise may suddenly turn the uterus backward. This being an unnatural position, causes irritation, prolapse, constipation, and finally perimetric adhesions form. Then resort is had to forcible replacement, or once more the inevitable hot water and glycerine tampon. The uterus is replaced. It has to be kept there. The dysmenorrhea, or some form of menstrual disturbance, continues and possibly Alexander's operation, or ventral fixation is resorted to, to suspend the organ which has lost its normal erectility and no longer can depend upon its natural supports. Lawson Tait tells us that he has found that mere division of the cervix, and I suppose he includes divulsion also by the rapid method, is a harmless proceeding, but as the results cannot be maintained without the subsequent use of the stem, the two proceedings are involved in condemnation. As he is at present much opposed to stems, he discountenances this treatment and adopts instead occasional dilatation, which he finds far more satisfactory, *i. e.*, he gets what he calls temporary relief. But I cannot help thinking that the occasional dilatation does far more good than simply dilate,—it stimulates,—and that is exactly what we want. Prof. T. G. Thomas (*Annals of Gynecology and Pediatry*, May, 1893, page 407), in cases of irreducible corporeal or cervico-corporeal anteflexion, believes in dilating the cervical canal, first with graduated dilators and then with Ellinger's dilator, under anesthesia, until he has stretched the whole canal of the cervix, es-

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pecially the internal os; after which he introduces a glass stem, which he believes is far safer than any other substance one can employ, which is kept in position by a sustaining pessary. This is done under the most thorough antiseptic precautions, and though he considers it a dangerous, he believes it a thoroughly warrantable treatment and tells us he has treated many hundred cases of anteflexion in this way and has never had a fatal issue; but in cases of true cervical flexion he does not accomplish much good. We thus see that in reducible anteflexions treated in this way we have all the indications covered, especially those which increase the nutrition of the organ and its muscular investiture. In my experience I have had occasion to find that simple occasional dilatation, even when done under an anesthetic, is not sufficient to accomplish in all cases what we want, and that the theory which has accomplished such good results in practice in the method adopted by Dr. Thomas necessitates a uterine splint which will maintain the uterns until it is strong enough to become functionally active. But I have also found that in a large number of cases this can be accomplished by a treatment which I believe is attended with less danger, if carefully done, and which will produce results equally satisfactory, and in a few words I will describe my own method of carrying this out. I first etherize, and, under most careful antiseptic measures, dilate the canal, having previously assured myself that no adhesions exist, simply inflammation in the uterus or its surroundings. I have sometimes found that the flexion is so acute that it is impossible to get any dilator through the internal os. I then in these cases dilate as much as possible and trust to future treatment to accomplish this result. I have lately had made for me by Mr. Durbin, of Denver, an Ellinger's dilator, of which the dilating portion is made of copper, subsequently plated like a uterine sound, capable of being bent at whatever angle I wish, and, at the same time, being sufficiently strong, I think, to accomplish all the stretching that is required. Having accomplished this primary operation, I then two or three times a week, again under antiseptic measures but without an anesthetic, pass my dilator and gradually accustom the uterine canal to the use of a foreign body, stretch gently until slight pain is felt, at the same time endeavoring by supra-pubic pressure to somewhat straighten the uterus. I swab out the canal thoroughly with creoline water and place a wool tampon, made perfectly antiseptic with creoline, in the vagina and pack it as far front as possible, endeavoring to get the os behind. I now use a mild Faradic current, either antero-posteriorally or with one electrode in the vagina. I direct my patient to try to accustom herself to urinate at stated intervals, and to endeavor to overcome a constant desire, which has become a habit. I use tonics, especially arsenic, to improve the blood, and order bromide of potash in ten grain doses, with a citrate of potash in the form of natural mixture, three times daily for a week before the menstrual period. I order the patient, if constipated, a mild aperient when needed, in the form of a wine glassful of rubinat water, and, once a week at least, an anema for the lower bowel. I leave the tampon in for two or three days till the morning of the next treatment and order the patient, previous to its removal, to introduce a small quantity of creoline water to facilitate the removal ef the tampon, and then to irrigate thoroughly with a pint of *cool* water, which is acidulated with lactic acid about one per cent. I believe that by this means we stimulate the uterus to development, encourage its erectibility, overcome the hyperesthesia of its mucous membrane, make the menstrual blood more fluid and less liable to clot, and ensure the least liability to the establishment of inflammation. I encourage my patient in outdoor pursuits, but prohibit all form of gymnastic or calisthenic exercise, contortions, tennis or horseback riding that will be productive of strain and local venous engorgements.

There seems to be a common impression amongst mothers either that the uterus does not exist or that certainly it has no diseases prior to the appearance of menstruation, and I fear that we do very little to impress upon them the facts which I have endeavored to outline in this paper. Our brothers, the oculists, certainly have preceded us by their study of the ocular defects in childhood and the result of their work is apparent in the great attention paid to-day to the improvement of the hygiene in schools. We should impress upon a mother that the future well being of her daughter greatly depends upon her watchfulness during the few years that precede puberty. She should acquaint herself with those books that tell her how her daughter is to be gradually trained towards the perfection of her menstrual function. That her sons and daughters are to be brought up only on an equality that tends to produce the most perfect of its kind, and that the girl who is thoughtless of sex, and anxious only to compete with her brother will invariably sacrifice the attainment of her full perfection for a condition that will handicap her for the rest of her life.

A Plea for Circumcision.

BY MARK J. LEHMAN, M.D., OF NEW ORLEANS, LA.,

Ex-Assistant Surgeon U. S. Marine Hospital Service.

Twenty years' critical observation, study and investigation of diseases that men especially are heir to is sufficient apology for intruding some views upon a subject that from time immemorial has been dismissed by medical writers in a few brief paragraphs. Communities have from time to time agitated the question of regulating the "social sin," prayers have been offered to the throne of Grace for the saving of fallen women, even legislation recalling the puritanical "Scarlet Letter" that stamped the wearer as an outcast, has been essayed—not with a view of ameliorating the bodily afflictions of the depraved but that unknown quantity—the Soul. If sacred and profane literature is critically analyzed it appears that Abraham and his contemporaries, wise men

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in their day, demonstrated a knowledge of Hygiene in adopting by "special mandate" the ceremonial of Circumcision, and throughout centuries Jew, Mahomedan and other nations and creeds of the Orient—and their descendants "scattered to the four quarters of the Earth" even to these days of enlightenment adhere to the ceremonial.

The origin of Circumcision was a necessity readily recognizable to day, and had it been adopted simultaneously in the earlier days of creation poor mortals would have been exempt from many diseases directly traceable to the generative organs. Any physician of average intelligence has had occasion to note the various neurotic diseases of childhood in males, incontinence of urine, phymosis, paraphymosis and other ills, wails and woes traceable to a peculiar prepuce, either in texture, formation or other anatomical abnormalities. Again reflex irritation—inherited—may be chargable to an abnormality of the prepuce in past generations. Inferential reasoning leads to the objective summary—"Would future generations be benefited by Circumcision?"

If the Jewish type be considered as the basis of an affirmative decision any fair-minded physician would be justified in the indorsement of the view.

A glance at the case book of the average physician would exhibit an absence of Jewish patients—or at least a limited percentage among neurotic diseases—epileptics, syphilitics, while the puny, marasmatic infants are few and far between.

It is only of late years that the intimate relations existing between the genitals and brain centers has been recognized and demonstrated.

It is a matter of every day occurrence that puny, ill-nourished baby boys present themselves before physicians, and without more than a casual glance the case is dismissed with a suggestion as to baby food. Frequently cases of this nature have come under my observation and an examination of the prepuce and its removal is followed by the fretting infant becoming a model of the plump, good baby—a mother's joy and a father's pride. It is not my intention to go into scientific detail as to the whereas and wherefores—but to confine myself and briefly to, what may seem vagaries. Civilization will not admit of placing out of havan's way the diseased—nor is the ancient idea of quietly burying the deformed and afflicted for a moment entertained. The limit between the "clean and unclean" has been effaced centuries ago, and it has now become an open question if phthisis, cancer, syphilis, scrofula and cancer are not one and the same disease, appearing under distinct conditions. Who can say to the contrary? Science if not common sense must have full sway in its endeavor to impress the coming man, not only with his duties, but what is due future generations. Municipalities find it an impossibility to cope with the insidious and filthy diseases always in their midst, and a howl goes up by the orthodox if such a simple measure as general circumcision would be enforced. True its value would not be demonstrated at once, but future generations would remember the men who would advocate and bring it into universal use. It has become demonstrated again and again that the prepuce is of no importance and facts exhibit a number of diseases—or diseased conditions directly traceable to the prepuce. It behooves the physician to advocate the removal of this "causa morbi"—whether necessary or not so as to have a beneficial effect in future generations.

Let common sense assert itself and take as an example the children of Israel, who from the Abrahamic era have followed this dogma from a religious idea, and are *living evidences* of its beneficial effects, and in these days many of the Judaistic faith regard it as an hygienic measure and nothing more. Experience proves its utility, its necessity, and its universal adoption should be urged at once.

Abdominal Surgery.—Shall Only Specialists Operate?

BY E. S. KELSO, A M. M.D., JOPLIN, MO.

The peritoneum was the nolle me tangere of the older surgeons, and until the advent of antisepsis the opening of the abdominal cavity for surgical purposes was one of the rarest of operations, and was only performed by the boldest and as was then thought the rashest of operators. Even the enlargement of a wound penetrating that cavity was rarely attempted, as it was generally believed that surgical interference would still further jeopardise the life of the patient. This idea seems to have been based upon the fact that a vast majority of wounds penetrating the peritoneal cavity were fatal; we now know, however, that they were so only because such wounds usually penetrate also the intestines or other vital organs. The united testimony of all modern surgeons is that laparotomy in itself is not a dangerous operation. So far as my own experience goes, it is confirmatory of this fact. I have been connected with several cases, in no one of which do I think the mere opening into the abdominal cavity either caused death or hastened that event. In my first case the laparotomy was performed in a free for all fight at a country dance. The incision was made by a fellow who had acquired his education in a fourth class saloon. As an operator he was bold and original, whatever might be said as to his skill or his prudence, and the operation was performed with total disregard of antiseptic precautions. Beginning at the linea alba just above the navel, he extended the incision by one sweep transversely toward the right to the middle of the back, slicing off a small piece of the liver, and permitting the intestines to burst forth and trail upon the floor. I saw the case some hours afterwards, and treated it with as much regard to antisepsis as my knowledge at that time permitted, that being more than twenty years ago, and he recovered without an untoward symptom. He always believed however, that I saved his life, as a doctor who saw him before me had merely given him

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some morphine and left him to die. He showed his gratitude to me by paying me my fees in full, and some years later he also killed a man that I didn't like, which goes to show that we should always save our patients if possible, as we don't know how soon they may do us a great favor.

Since then I have seen a man die from a stab in the abdomen made with a small pocket knife, inflicting a wound scarcely half an inch long. Now how shall we explain the difference in result of two such cases: In my opinion the explanation is very simple, in the latter case the intestines were wounded, allowing the escape of fecal matter into the peritoneal cavity, in the former as good luck would have it there was no intestinal wound whatever.

Seeing then that laparotomy is not *per se* a dangerous operation, it is proper next to inquire as to operations within the abdominal cavity. By experiments upon the lower animals as well as by operations upon the human subject, it has been proqed that enterotomy and enteroraphy when properly performed, are by no means very dangerous operations. This being the case, it is evidently our plain duty in every case of wounds penetrating the peritoneal cavity to open the abdomen and examine the condition of viscera, giving such treatment as the nature of the case demands. This duty is rendered still more imperative when we consider that a wound penetrating the intestines or laying open a vessel of considerable size in the abdominal cavity, if left to itself is almost inevitably fatal.

The details of treatment will not come within the scope of this paper, yet as practiced by quite a number of surgeons in different parts of the world, and in most cases upon patients whose chances for life without operation were practically *nil*, the result has been about thirty percent of recoveries for gunshot wounds, and a much greater percent for incised wounds. This is a very good showing as compared with the records of our late war, in which the recoveries from penetrating abdominal wounds of all kinds without operation, were about ten per cent, and there is little doubt that in most of the recoveries the intestines had received no injury. Of the few cases of penetratihg abdominal wounds that have fallen under my own observation, only two were treated in accordance with the principles of modern surgery, and both recovered; the others were all treated on the expectant plan, with a fatal termination in every case. Of the two recoveries, one has been already referred to; in the other which was a stab wound, six apertures in the intestines were closed by suture, two or three bleeding vessels of the omentum were ligated, the peritoneal cavity was thoroughly cleansed and closed without drainage. The recovery was rapid, complete, and uneventful. With such facts as these before us, it seems that our duty should be plain, even though the chances for recovery by operative interference should not be enhanced more than threefold.

But if there is any question as to the desirability of surgical interference in the case of abdominal wounds, there can be none in many pathological conditions, where a vast number of operations have established the value of the procedure. Prominent among these is ovariotomy. Eighty-three years ago Ephraim Mc Dowell performed the first ovariotomy in a little log cabin in Kentucky, removing a fibroid tumor weighing 22 lbs., and as the case was in every way successful, it at once established the procedure as a legitimate operation, yet 50 years afterwards less than three hundred cases had been recorded with an average mortality of about 35 per cent. At the present time it is a poor season for ovariotomies if some of our prominent gynecologists as Lawson Tait or Spencer Wells, do not have that many cases in a year.

The mortality in this operation has been reduced by the best operators to about seven or eight percent, yet much depends upon the class of cases, as Tait has performed 139 successive ovariotomies without a death.

An idea of the value of this operation may be obtained from the cases recorded by a single individual. Sir Spencer Wells I believe as yet heads the list with about four thousand cases, and an average mortality of about 8 per cent. The lives of the patients would not have averaged more than three years withou treatment, and as these cases appear mostly among the young and middle aged, the average expectancy of life among the cases of recovery will reach at least 24 years, so that with due allowance for the lives shortened by the operation, there yet remains to his credit more than eighty thousand years of health and happiness added to the sum of human life.

As to the oblation of the normal ovaries for the purpose of anticipating the menopause, there is greater room for difference of opinion. It was brought into prominence if not originated by Robert Battey of Rome, Georgia, and is generally known as Battey's operation. The friends of the operation have also applied to it the term oophorectomy, while those who disapprove of it persist in calling it spaying. It is now, however, an established operation, and is not only justifiable under certain circumstances, but is imperatively demanded. There are often very distressing circumstances or painful diseases connected with the menstrual function, which might put a woman's life in jeopardy, or render it very miserable, and which all other means have failed to relieve, In such a case I believe a surgeon would be derelict in his duty if he should withdraw from her the only source of relief which yet remained.

Oophorectomy has also been resorted to for the purpose of preventing pregnancy in cases of unusual pelvic deformity, and is generally considered justifiable. Some time ago Dr. Senn reported a case of this kind which he saw operated on by Lawson Tait. The patient was a married woman with a greatly deformed pelvis, and had had such trouble at childbirth as to render it unadvisable to hazard another attempt. It is evident that Dr. Senn did not quite give the consent of his mind to the procedure, and as a practical American he suggests a little operation, virtually without danger, which might have

been performed upon the husband, and which would have secured to her the same immunity.

As I was reading the article a friend entered my office to whom I related the circumstance. He readily agreed with Dr. Senn, and remarked that in his opinion there were entirely too many men capable of paternity, and he believed that all young men on arriving at the age of twenty one should be examined by a board appointed for the purpose, which board should pass upon their moral, mental, and physical qualifications; that if found proficient they should be furnished with marriage licencee, and if not that they be immediately incapacitated for marital duties. "Then," said he will be fulfilled that passage of scripture which says: "To him that hath shall be given, and from him that hath not shall be taken away even that which he hath." Perhaps, however, the gentleman did not take into consideration the fact that he was proposing to deprive a certain proportion of the human family of the only luxury common alike to rich and poor, and equally prized by both. Degression aside, oophorectomy is by no means a very dangerous operation, the mortality not reaching more than two or three per cent, irrespective of the diseases for which it has been practiced.

The oldest of all laparatomies is that of the cesarian section. At what time, among what nations, and with what success it was first practiced, is unknown, but it probably antedates civilization. In all the European languages from the Kaiser Sehnitt of the Germans to the taglio Cesario of Italy, the name of the operation may be fairly translated as the Cesar cut, and no doubt has its origin from the statement of the elder Pliny that Julius Cesar was not born in the natural way, but was cut from his mother's womb. As Pliny was born only a few years after the death of Cesar, he probably had correct information, and if so it must have been an eminently successful operation, as Aurelia was yet living when her illustrious son invaded Britain.

The operation is known to have been performed among savage tribes in the interior of Africa, by ignorant men in various parts of the world, and has been successfully performed by midwives, and by women upon themselves. Within the last two hundred years eleven cases have also been collected in which the women were the subjects of hyesterotomic rips from the horns of cattle, one of which was in the state of Kansas, mother and child both surviving. Of all operations reported about 70 per cent have proved fatal, but strange to tell, of the eleven cowhorn cases, eight women and five children were saved, that is to say, when the cows have entered the lists with the surgeons, they have carried off the honors by a score of more than two to one. The explanation however is easy. The surgeons have as a rule selected cases which were almost in articulo mortis, and perhaps no woman ever operated on would have lived more than a few hours longer, while the cattle selected better cases. It is but fair however to state that within the last ten years american surgeons have reduced the mortality of their cases to about 25 per cent. With such a record though it should be improved, it seems almost like murder to allow a parturient woman with an unsurmountable obstacle to natural delivery, to go to the grave with her unborn babe, whether from lack of nerve of the physicians in attendance or lack of knowledge. The whole history of the operation also goes to prove that if performed at all, it should be performed early, while perhaps the child is yet living, and before the vitality of the patient is exhausted either by her sufferings, or by futile attempts at delivery.

Allied to the Cesarean section in many respects, and following it in some cases, is that of hysterectomy. Twenty-five years ago it was not a recognized operation for any purpose whatever. About that time Gross in speaking of the treatment of uterine fibroids, states that the operation of removing the womb had been performed a few times, but with such results as not to warrant its repetition; and Erichsen speaks of it as an operation not to be thought of.

Within the last ten years hysterectomy has been performed many hundreds of times, the German surgeons taking the lead, and the mortality has been reduced to about 20 per cent. It is not probable however that as a surgical procedure it will ever become as popular as ovariotomy, since the diseases for the relief of which it is sought, are usually of a more malignant character, and a permanent cure is more rarely effected, still many cases of fast growing fibroids which if they did not immediately threaten the lives of the patients, would at least have rendered them very miserable, have been operated on with permanent relief, while for carcinoma it is equally as successful and gives as lasting results as the amputation of the breast, the ablation of the tongue, the exsection of the jaw etc., which are considered not only justifiable but highly commendable operations.

The limits of this paper will not permit me to mention the operations which have been performed upon the liver, kidneys, spleen and other organs, or to comment upon the opening of the peritoneal cavity in acute idiopathic peritonitis, and cleansing it of the products of inflammation, to be followed by local antiseptic and antiphlogistic treatment of the peritoneum, operations which a few years ago would not have been thought of, but which have been more than justified by the results.

Enough has been said to show that laparotomy has rarely been performed except in case of those diseases or injuries which if left to themselves would have speedily terminated in death, or deprived the patients of all those comforts which render life desirable. Enough has been said to show that even the most unpromising operations have been reasonably successful, and that the cases suitable for operation are as a rule not difficult to diagnose; it only remains therefore to decide who shall perform the operation.

Dr. Brainard used to tell us that once when examining a student for his degree, he asked him what he would do if he had a patient with a strangulated hernia

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which had resisted all ordinary methods of reduction. The reply came without a moments hesitation, "I would send him to Chicago to be operated on," and I am afraid that is about the reply many of us would make in regard to cases requiring laparotomy. Where time and the physical and financial condition of the patients permit, I have no objections of sending them to surgeons who are reputed to be specially skillful in that particular department and the same may be said of all other surgical operations; yet who would think sending a man with a crushed and mangled limb to Chicago or New York to have it amputated.

In many cases requiring laparotomy the loss of a few hours means death to the patient, and even when time is not urgent, the physical or financial condition of our patients is such as to forbid removal from their homes. I believe therefore that those of us at least who have a desire to be recognized as surgeons, should so qualify ourselves that we may not only feel competent, but feel willing when necessary to perform any recognized operation in the entire domain of surgery; and that we should no sooner shrink from opening the peritoneum to perform any necessary operation, than we would from opening up a wound in the arm to tie a bleeding artery. When we have determined to do this, and when occasion offers to act promptly in accordance with our best judgment, we shall at least have learned to give our patients every chance for their lives which lies within our power.

Cleaning out of the Inguinal Fossa for Malignant Disease of the Inguinal Lymph Nodes.—Little has been written in journals and text-books (*Centbl. f. Chir.*) concerning the necessity of thoroughly removing the inguinal lymph nodes in cases of carcinoma of the umbilicus, penis, vulva, anus, and the lower extremities, and in many cases of sarcoma of the thigh; far less than has been written concerning the removal of the axillary contents in mammary carcinoma.

Rupprecht has done this regularly for ten years in such cases, whether enlarged lymph nodes could be felt or not, unless there has been some especial reason for not doing so. He makes an incision from the pubis to the anterior superior spine of the ilium, and joins this by another incision which runs downward in the line of the great vessels. This exposes a triangle which is bounded above by the aponeurosis of the external oblique muscle, without by the fascia lata, within by ad ductors. This space is then thoroughly cleansed out, the long saphenous vein being ligated and cut.

When necessary he cuts the falciform process in order to reach the lymph nodes which are back of it.

He also cuts Poupart's ligament when necessary.

The femoral vessels are laid bare more or less by this somewhat extensive dissection.

Wounds have healed for the most part without unfavorable reaction.

EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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Methylene-Blue in Malaria and Acute Bright's Disease.

It is a well known fact that as aniline dyes which stain bacteria also kill them, so the amoeba, which causes the symptoms of malarial fever and is known by the name of plasmodium malariæ, when penetrated by methylene blue loses its life. It seems therefore very logical to try the administration of the comparatively harmless aniline dyes for the destruction of disease germs within the blood and tissues as well as they have been tried locally with favorable results in some surgical affections.

The results so far reported seem to justify us in using it in cases where parasiticides are indicated. For instance in those cases of unequivocal malaria that do not yield to the treatmeut with quinine or where an idiosyncrasy exists toward this alkaloid.

The results obtained by Ehrlich and Guttmann in the treatment of malaria with methylene blue have lately been substantiated by Parenski and Blatteis (*Therapeut. Monatsh*, January, '93). Thirty-five cases all of a severe form of malaria, accompanied with intense chills, enlarged spleen, and in which plasmodia were demonstrated in the blood, were treated partly by hypodermic injections and partly by internal administration of the drug. For hypodermic injection one per cent and later five per cent solutions were used. Of these one gramme was injected twice a day, which corresponded to a dose of 0.02 to 0.1 a day. Internally, doses of 0.4 to 0.5

were used twice and three times a day. In addition to the thirty-five cases of malaria twenty-six healthy and sick persons received a similar treatment and it was found that the internal administration in doses of 0.1 to 0 2 caused no unpleasant effects whatever. Dysuria occurred very rarely and only after long continued use of the drug. Larger doses, 0.4 to 0.6 often produced vomiting soon after the first dose; after the second dose vomiting became less frequent and after the third and subsequent doses there occurred, as a rule, no vomiting at all. Sweat and sputum became of a slightly green, feces and urine of an intensely blue color.

The hypodermic injection caused only slight pain; the urine was stained dark green, feces remained unstained.

As a rule the attacks of fever disappeared after three to five injections, upon internal use after three to six, more rarely after twelve doses. In twenty three cases a diminution in the size of the spleen was observable. The plasmodia disappear from the blood slower than the fever attacks abate; in many cases, however, they could no longer be found after two or three doses.

Peter Netschajeff, of Moskow, Russia, has published fifteen cases of acute Brignt's disease in the *Deutsche Medicinische Wochenschrift*, May, 1893, that were very favorably influenced by the administration of methylene blue. Every second day 0.1 gramme was administered three times a day. An hour after the administration the urine was usually stained blue, and a day after the use of the drug the quantity of urine voided was very much increased, gradually albumen and casts disappeared. No disagreeable symptoms were ever ob served. The increase in urine does not seem to be due to a diuretic action in the ordinary sense of the word, for when the chemical was administered to patients with cardiac disease (affections of the valves or myocarditis) or in cirrhosis of liver diuresis was never produced.

It may not be superfluous to mention, in this connection, that strangury which may occur in consequence of a large dose of methylene blue is readily relieved by eating nutmeg.

Plasmodium Malariæ.

In cases of fever, where the physician is in doubt whether it is due, partly or entirely, to malarial infection, it must now be considered his duty to examine the blood for the plasmodium malariæ. The examination is a comparatively simple one if no stain is used, provided the examiner is acquainted with the appearance of the plasmodium. It is found within the blood cells as well as without, its shape varies like that of other amoebas. It usually contains within its interior some granular material derived from the coloring matter of the red blood corpuscles and in consequence of these granules it is more readily recognized in the fresh unstained specimen. At times oval bodies are observed to be arranged around a central point like the spokes of a wheel, which appearance is due to segmentation. The blood is obtained for diagnosis in the usual manner, *i. e.*, by tying a string around the finger so as to obstruct the return flow of blood in the veins and then pricking the finger by the side of the nail. The magnifying power to be used is one of about 800 to 1200 diameters.

If it is desired to stain the specimen the blood is fixed upon the cover glass not by drawing through the flame, but by immersion into absolute alcohol. The stain used is a watery solutinn of methylene-blue.

Scientific Obstetrics in Private Practice.

Under this title Dr. Edward P. Davis has published an article in the *Medical News* which we would recommend to be read by all general practitioners. It expresses in substance the views of the most advanced in the profession. Holding the same views as those laid down in the very able and instructive article, we take the liberty in publishing it in its full text.

If one were asked the meaning of the word "scientific," a proper definition would be found in a phrase indicating the possession and dissemination of knowledge. A scientific journal is one that contains and disseminates knowledge of the subject of which it treats. Modern medicine is a science in so far as it contains valuable knowledge concerning human life and disease, and scientific obstetrics is the theory and practice of this branch of medicine, characterized by accurate knowledge.

In this one point of the possession or absence of accurate knowledge rests the difference between the obstetric practice common in the United States twenty-five years ago and the theory and practice taught at the present day. Impressed with the ability of nature to deal successfully with the emergencies of labor, the practitioner who attended obstetric cases has been wont to comfort himself with the axiom that labor is a natural process, of which he need not seek to ascertain too minutely the details. The condition of pregnancy he regarded as naturally normal, and hence without especial tendency to disease. The lying-in period was to him a natural stage in the life of the individual, and required at his hands no especial scrutiny. An accurate diagnosis as to the factors present in a given labor was rarely made, unless some serious emergency arose.

There have been many reasons for this condition of affairs. The comparatively recent discovery of anesthetics placed at the disposal of the obstetrician a means of diagnosis of inestimable value. The employment of antiseptics has rendered possible manipulations for the diagnosis and treatment of labor that formerly were impracticable. Methods of diagnosis are now commonly taught and practiced that, at the period mentioned, were only to be seen in practice in the large hospitals of Europe. Modern obstetrics has, then, great advantages in its opportunities to acquire thorough knowledge of the patient and of her labor, and this, too, without the infliction of additional pain, or the incurring of added risk to life. The characteristic of modern obstetrics is its scientific element, as shown in the accurate

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knowledge that it requires concerning matters formerly thought to prosper inevitably through the kind co-operation of Nature.

Scientific obstetrics is the rule in the modern hospital, but it is often "honored more in the breach than in the observance" in private practice. The reasons for this are many. First, among all, is the common belief, derived largely from physicians and nurses, that, because labor is a natural process, it is bound to proceed successfully without intelligent supervision. If this is true, why should a patient tolerate palpation, auscultation, or pelvimetry; or why should she take an anesthetic when the mechanism of labor is interrupted, and a thorough examination of the condition present becomes necessary? A common belief that has descended from the days of the early craniotomist, or man-midwife, as he was termed, is that any interference with labor means, practically, the use of forceps, and hence the objection to critical examination in an emergency. Again, it not infrequently happens that a complicated labor terminates spontaneously, and apparently with success to mother and child. It does not occur to the patient and her friends that complications may have arisen, by reason of the long continuance of the spontaneous labor, that could have been avoided had intelligent interference been practiced.

There is especial need for scientific obstetrics in private practice, because the practitioner is more directly responsible for the condition of his patient when he is engaged in hospital practice He lacks in private the experienced observation of trained nurses; he misses the intelligent co-operation of resident physicians; and experiences the great disadvantage that the absence of order and discipline, so common in a private house, entails upon him. It is, therefore, especially necessary that he gain thorough knowledge of his patient by personal observation and study, and this knowledge is the essential of scientific obstetrics. The fact that the best results in obstetric practice are observed in hospitals, draws attention to the need for scientific work in private cases.

Omitting a consideration of the minor details of private obstetric practice, we urge the importance of a thorough examination by the practitioner of all pregnant patients. We are well aware of the fact that many cases are not seen by their attendants until labor is far advanced, and no opportunity has been given to examine the patient during pregnancy. This is growing to be, however, less the case than formerly, and especially in first pregnancies, when the natural dread of an untried experience brings the patient to the physician comparatively early. This scrutiny of the pregnant patient should be directed especially to ascertaining the condition of the organs of elimination, and the success attending their action. The examination of the urine should be an invariable practice, and valuable information will be given by ascertaining not only the presence or absence of albumin, but by careful microscopic study of the sediment, and also an estimation of the amount of urea excreted. In the Maternity Department of Jefferson Medical College Hospital we have for some time derived valuable information regarding a patient's eliminative powers by ascertaining the quantity of urea excreted. The presence of albumin is of itself a trifling matter, unless the microscope reveals evidence of decided structural change in the kidney.

At or after the seventh month of pregnancy it becomes the duty of the attending physician to ascertain the mother's size, and the relative size of the fetus and the position that it occupies in the mother's pelvis. This is a procedure commonly thought unnecessary, and reserved for the lectures of those who teach obstetrics. That such is not the case is well exemplified by two fatal cases, seen by me recently in consultation, in both of which embryotomy upon the dead fetus was necessary. Two well-developed male children were sacrificed to a lack of diagnostic skill on the part of the medical attendant, and to complete the unfortunate history of those two cases, the lives of the mothers were lost on account of the stupid laziness of the physicians, who neglected to use antiseptic precautions during labor. In both cases the child had perished before the consultation, and the embryotomy was performed to spare the medical attendant from reproach and criticism for his failure to deliver the mother. These four lives could have been saved had proper precautions been taken.

The practice of general medicine, including obstetrics in country towns or villages, often taxes to the utmost the skill and wisdom of the so called "country doctor." As a result, he has a range of experience unknown to his city brother, and becomes by natural development more assured, self-reliant, and efficient. He is the man who, above all others, can appreciate the value of any method of practice that shall add to the positive knowledge he has of his patient. We do not ask him to provide himself with elaborate or costly pelvimeters, or instruments for diagnosis, but, as is our custom in lectures at the Philadelphia Polyclinic, we do urge upon the general practitioner a knowledge and practice of palpation, auscultation, and of such a method or methods of estimating the size of the mother's pelvis and the relative size of the fetus as may be within the scope of his possibilities. No student graduates from a well-appointed medical college who is not in the possession of this knowledge, and certainly the general practitioner already established cannot afford to be behind the recent graduate in his resources. The objections urged against the examination of pregnant patients, including the measurement of the pelvis, are based upon needless exposure of the patient, or rude and unskilful manipulation. We have yet to find a private patient, of whatever station in life, who offers the slightest objection when her physician asks that he be given an opportunity to acquire a knowledge that shall the better enable him to care for his patient, particularly if, by so doing, he subjects her to no exposure, nor to tedious and painful manipulation. The abdomen of the patient may remain covered by one thickness of cotton or linen, without in the least incon-

veniencing the physician, and medical students under my instruction are taught to make their examinations in this manner.

One of the great advantages accompanying this mode of practice is the lessening of vaginal examinations, which are a source of considerable danger to the patient. It is perfectly possible by palpation alone to follow the head of the child as it descends through the pelvic canal and impinges upon the pelvic floor. The character and efficiency of the pains of labor may also thus be accurately observed, and oftentimes valuable assistance can be rendered by external pressure gently and judiciously applied.

When the mechanism of labor is interrupted, a thorough internal examination is at once indicated. This is often impracticable without the administration of an anesthetic. The practitioner should be prepared to interfere for the assistance of the patient. Forceps should be prepared and ready. The rectum and bladder should be emptied, and, while it is not necessary to state to the patient that an operation is to be performed, yet, while she is under the influence of the anesthetic, it may be found wise to terminate the labor. It is often impossible to accurately diagnosticate a faulty position of the head without an anesthetic, the resistance and suffering of the patient being so great that sufficient of the hand cannot be introduced to make a thorough examination. When, however, such an examination has been made, and before the examining hand has been withdrawn, the forceps may often be accurately applied to the sides of the child's head, and the labor brought to a successful termination. In other cases, version and extraction may be found necessary. In either event, examination of the patient under anesthesia will spare her hours of suffering, and will often save the life of an infant, and sometimes that of the mother.

The same thoroughness in treatment should obtain in the diagnosis and treatment of injuries to the genital tract. By the term "laceration of the perineum," we understand a solution of continuity that extends more deeply than the posterior commissure or fourchet. We are aware that a laceration in the median line may extend beyond the fourchet, and still not impair the supports of the uterus to any appreciable degree. When we read and hear of large numbers of cases of labor in which no laceration of the perineum has occurred, we are impressed with the fact that those who record such extraordinary experiences either consider that a laceration of the perineum usually extends into the rectum, or else that they did not accurately examine the cases. The examiner may be readily deceived by a superficial examination by the finger only of the genital canal soon after labor. Clotted blood often fills a torn surface, giving to the finger the same continuity of smoothness that marks the uninjured mucous membrane. It is only by the thumb and finger, one inserted in the rectum, or, better still, by actual inspection, that the condition of the genital tract after labor can be accurately ascertained. Considerable observation of labor cases, and the careful employment of the best-known means for preventing laceration of the perineum, have convinced me beyond reasonable doubt that such an injury is inevitable in many cases. It is negligent not to discover it; it is lazy and dishonest not to endeavor to repair it.

Fortunately, in these matters, public sentiment is demanding the advantages of scientific obstetrics. We recently had occasion to tell a young woman that she had sustained a laceration of moderate extent that ought to be closed. She said that if such was the case, she earnestly desired that it be at once repaired, as her sister had suffered from the neglect of her physician in not suturing a similar laceration. We are furthermore helped in dealing with these questions by the fact that experience shows us that excellent results may be obtained as late as twenty-four or thirty-six hours after the occurrence of a laceration. It is far better practice to give the patient and physician twenty-four hours' rest after a trying labor, and then, under anesthesia, or with the use of cocaine, close a laceration under favorable circumstances, than to further exhaust a weak patient, and with poor light and laboring under great fatigue, to improperly perform the physician's duty. If torn surfaces are found glazed over, the simple expedient of scraping them with the blade of a pair of scissors, or with a curet, will suffice to secure union by first intention.

It is burdening you with a trite observation to speak of the importance of obstetric antisepsis or asepsis, and yet the same reasoning that enables the practitioner to assert that in his 1000 cases he has never had a lacerated perineum, leads him likewise to claim that his 1000 cases he has never had a case of puerperal septic infection. He may have avoided signing a death certificate for a patient recently delivered, the certificate bearing the words "peritonitis," "blood-poisoning," "inflammation of the bowels," or "puerperal fever"; but cases occasionally perish some weeks after labor, with "jaundice," "pneumonia," "congestion of the liver," or "malaria," that, on closer study will be found to be the results of puerperal septic infection. The faithful practice of aseptic or antiseptic precautions greatly lightens the load of responsibility that the practitioner of obstetrics must carry.

Not the least of the advantages derived from the scientific practice of obstetrics lies in the avoidance of interference by those who have no right to molest the patient. The practitioner's best efforts are often thwarted by ignorant and meddlesome persons. He cannot, however, honestly forbid interference, unless he knows positively that there is no occasion to molest the patient. He will obtain the best results in obstetric practice who does the work himself, unless he can command, for certain things, the assistance of a trained nurse. Thoroughness in diagnosis, the faithful observance of antisepsis in treatment, and the protection of his patient from meddlesome interference, will give the best results. Such a method of procedure is thoroughly

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scientific, for it demands the best knowlege, the most careful and skilful manipulation, and, above all, an honest and fearless attempt to meet the difficulties that may arise. In the present stage of medical science, every woman has a right to demand such treatment, and if a practitioner of medicine cannot give his patient such care, he must inevitably, by the inexorable law of the "survival of the fittest," give place to those who can.

Dry Aseptic Operating.—Drs. W. H. Richardson and S. G. Mumford (*Am. Jour. Med. Sci.*) make a statement of the principles of wound treatment which are now so well established, viz., that the irritation of the tissues by manipulation and by chemical solution is to be avoided.

They especially dwell on the use of sterilized dry gauze instead of sponges. The gauze is cut in squares or strips, wrapped in a towel and exposed to concentrated steam heat for one hour; it is then dried in an oven for a few minutes.

They do not turn the edges of the gauze in and make little pads, but use it as it is cut, stating that the threads which may come from the frayed edges are not harmful.

They use the gauze as a tampon rather than as a wiper, packing it onto the cut surface as soon as possible, and not removing it until necessary.

In this way undue irritation of the tissues is avoided and there is no danger of infection by having sponges washed and handled during the operation.

They record one hundred and thirty continuous major operations in private practice which were not septic at the time of operation. Of these only one did badly.

Removal of a Lithopedion Thirty Years in the Body.—Gottschalk *Centrallblatt f. Gynak.*, *Brit Med. Jour.*), exhibited before the German Obstetrical Society, in March, a lithopedion five pounds in weight, successfully removed by abdominal section after it had been carried thirty years, causing more or less inconvenience to the patient at different times. The patient was 54, and had passed the menopause four years before. Her first pregnancy was thirty three years ago, and the child lived. During the second and last, extra-uterine pregnancy was diagnosed. Towards term, violent pains set in, which ceased together with the fetal movements. Peritonitis ensued, and kept her several months in bed. Thenceforth she recovered gradually and was regular till the menopause. The indication for abdominal section was the appearance of severe symptoms of obstruction, especially in the direction of the bladder. The symptoms were clearly due to the impaction of a hard substance, the fetal skull, in the pelvic cavity. The uterus was pushed upwards and backwards against the sacrum, flattened by the fetus, which was as hard as a rock. The tumor reached as high as the umbilicus. The left Fallopian tube ran normally over it, and Gottschalk declares that the fetus, well-preserved, lay entirely within ovarian tissue. The sac-wall was calcified, the placenta still adhered to its inner surface.

ABSTRACTS

Radical Cure of Inguinal Hernia in the Male.—Dr. Halstead (*Johns Hopkins Hosp. Bull.*) gives a concise and interesting history of the operations for hernia from ancient times to the present.

He then gives a description of his own operation which he has done fifty-eight times without a recurrence in any of the cases where the complete operation was done and where the healing was by first intention and uncomplicated.

There were, however, six recurrences; in three of these there was suppuration after the operation; in one hemorrhage and consequent healing by granulation; in one the cord was not transplanted, and one case on account of insubordination did not receive the proper after-treatment.

His operation consists in cutting down to the sac of the hernia, extending his incision to a point about four-fifths of an inch above and external to the internal abdominal wing; isolating the *vas deferens* and blood vessels of the cord; excising all the veins of the cord but one or two; isolating and opening the sac and replacing its contents; then closing the peritoneal cavity with fine silk sutures and cutting away the sac close to these sutures.

The cord in its reduced form is raised on a hook out of the wound to facilitate the introduction of the six or eight deep mattress sutures, which pass through the aponeurosis of the external oblique and through the internal oblique and transversalis muscles and transversalis fascia on the one side, and through the transversalis fascia and Poupart's ligament and fibres of the aponeurosis of the external oblique muscle on the other.

The two outermost of these deep mattress sutures pass through muscular tissues and the same tissues on both sides of the wound. They are the most important stitches, for the transplanted cord passes out between them. If placed too close together, the circulation of the cord might be imperiled, and if too far apart, the hernia might recur. They should, however, be near enough to each other to grip the cord. The precise point out to which the cord is transplanted depends upon the condition of the muscles at the internal abdominal ring. If in this situation they are thick and firm, and present broad raw surfaces, the cord may be brought out here. But if the muscles are attenuated at this point, and present thin cut edges, the cord is transplanted farther out. The skin wound is brought together by buried skin sutures of very fine silk.

This operation is practically the same as Bassini's operation, but was devised and practiced by Dr. Halsted six or eight months before Bassini published his work. It differs from Bassini's operation in the following respects:

1. Bassini always brings the cord through the muscles at the internal abdominal ring, while the point to

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which Halsted transplants the cord is determined by the condition of the muscles.

2. Bassini does not excise the superfluous veins.

3. In Bassini's operation the cord lies posterior to the aponeurosis of the external oblique muscle; in Halsted's between this aponeurosis and the skin.

Halsted keeps his patients on their backs for twenty-one days after operation in order to insure a firm cicatrix. He has been doing the operation for nearly four years and has kept nearly all the cases under observation since the operation. There have been no deaths.

Experimental Studies Concerning Antiseptics in the Treatment of Surgical Diseases of the Urinary Passage.—The observers have made more than five hundred experiments, concerning the germicidal action of the solutions which are in ordinary use in the surgery of the urinary passages—corrosive sublimate, biniodide of mercury, nitrate of silver, boracic acid, and potassium permanganate.

Silk threads were impregnated with pure cultures of bacterium coli oommune, proteus vulgaris, staphylococcus pyogenes aureus, and streptococcus pyogenes, and immersed for varying lengths of time in the antiseptic solutions. After a thorough washing with sterilized urine they were put into culture media.

The staphylococcus was the most resistant to the mercury preparations. The biniodide of mercury was much weaker than the sublimate.

Bact. coli comm. was the most resistant to nitrate of silver; streptococcus, the least so.

Boracic acid and permanganate of potash showed weak antiseptic power.

They experimented with catheters and bougies which were infected with pathogenic germs, and recommend nitrate of silver for disinfecting them rather than sublimate or boracic acid.

A one hour's immersion in 1:500 nitrate of silver solution sterilizes them if the oil or grease has previously been removed by washing them in alcohol.—*Epitome of Medicine.*

Effects of the Removal of the Suprarenal Capsules.—Professor Dominicis, after a series of experiments, announces the following results (*La Medicine Moderne*):

1. The experiments have confirmed the results obtained by Tizzoni relative to the lesions of the spinal cord (softening, affecting especially the cervical and dorsal portions). He did not, however, like the writer cited, observe the process of ascending degeneration, nor lesions of the celiac ganglion.

2. He has never seen regeneration or compensatory hypertrophy of the other capsule, or its remaining parts, in animals from which he had removed one capsule aud mutilated the other.

3. The fact that when the operation is skillfully performed animals are able to survive the total destruction of both capsules is a sufficient proof that death, in such cases, is not caused by intoxication, as had been thought, but by circulatory disorders consecutive to wound of the vena cava.

4. Pigmentation, described by other investigators (Marino Zuco, Alezais, and Arnaud), was produced in but a single case.

From the foregoing facts the writer deduces these conclusions:

The fact that profound alterations of the spinal cord are sometimes concomitant with similar changes in the celiac ganglion, while in other cases that structure is left intact, proves that these lesions do not depend upon each other, but that both must be considered as a consequence of the same cause, capable of acting upon both parts or upon one alone.

The fact that pigmentation has been met with by some observers and not by others proves that its cause should be sought in special circumstances, and independent of the physiology of the capsule.

The phenomenon observed by all experimenters is a trophic trouble manifesting itself at some distance from the time and seat of the operation. This is doubtless an effect dependent upon the trophic and vasomotor system, but regarding which no exact information can now be given.

Piperazin in Renal Calculus.—Stewart (*Therapeut. Gaz.*, *Brit. Med. Jour.*), has tried piperazin in three cases of urolithiasis with stone in the kidney, and on the whole the results obtained were very satisfactory. The first case was that of a lady, aged 28, who had been passing gravel more or less continuously for several years, and had had aching and often sharp pains in the lumbar regions for several months. Her urine was highly acid, specific gravity 1028; it contained neither albumen nor sugar, but numerous crystals of uric acid, amorphous urates, and also microscopic calculi of ammonium urate. There was great pain on firm pressure in both flanks. Alkaline treatment was pursued for some time, but, in spite of all, the patient got worse, and the amount of urine was greatly below normal. In January, 1892, there were signs of extensive hydronephrosis, and as an experiment (the patient refusing operation) it was decided to try the effect of diuretin. This drug also failed, and the piperazin treatment was then adopted, with the result that there was an almost immediate improvement in the amount of urine, the symptoms of hydronephrosis rapidly disappeared, there was much less loin pain, and the patient's general condition became better than it had been for years. From February 12 to April 2, the daily dose was from 12 to 20 grains. It was then discontinued until the 13th. Microscopic examinations during this time revealed abundance of amorphous urates, free uric acid, and ammonium urate crystals, a large amount of granular *debris* and epithelium from the cladder. Piperazin was then resumed in 20-grain doses until August 1, when it was dropped, the patient being considered practically cured. The second case was somewhat similar, but is remarka-

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ble from the fact that the renal trouble had been of very long duration, the diagnosis of renal calculus not having been suspected for some time. At the time of commencing treatment, there was well-marked pyelo nephritis, with passage of much pus and blood in the urine. Uric acid, urates, and calcium oxalate were also present. In this case, too, the use of piperazin proved successful in removing nearly all symptoms, and this improvement was maintained after discontinuance of the drug.

The Radical Treatment of Congenital Inguinal Hernia in Females.—According to Dr. Lucas Championniére (*Annals of Surgery*) the palliative treatment by means of trusses is becoming somewhat restricted. Increased frequency of operating has extended our knowledge of the pathological anatomy of the less frequent kinds of hernia, and our views concerning the stative frequency of the same are changed. Thus congenital inguinal hernia in females appears to be by far more freguent than was heretofore generally supposed. Among fourteen radically operated inguinal herniæ in women, he found in ten instances conditions pointing to a congenital origin of the disease. Among the symptoms to be so interpreted in this connection he mentions the existence of the round ligament in the wall of the hernial sac, which is hollowed out as by a furrow; the solid attachment of the serous covering with this ligament; the occurrence of small cysts on the base of the hernial sac. In the radical operation Dr. Championnière recommends that the incision be made as high as possible, in order to remove the latter as great a distance from the vulva as possible. The operator invades the inguinal canal, seeks the hernial sac from above downward, rather than *vice versa*. The serous cover of the round ligament is so intimately adherent to the sac that the removal of the sac, without taking along the ligament, is impossible. Therefore he separates, as a rule, the ligament together with the sac, as high up as possible; and after ligating, removes it. He found no disadvantages arising from this resection of round ligament, the stump of resection again attaching itself to the abdominal wall. The author recommends, after separating the hernial sac and before tying of the same, examination of the uterine annexa through the incision; if found to be diseased, these are to be extirpated at ouce. He believes this examination to be necessary, as these organs, in case of inguinal herniæ, are frequently dislocated to the affected side and are often diseased. The author provides against recurrences by splitting, in every instance, the inguinal canal in its whole length, separating and removing the peritoneum as high up as possible, and then uniting solidly and accurately the extensive denuded surfaces with each other by means of numerous deep sutures. A truss is but rarely prescribed. The author's results are very favorable; the operation in each instance was invariably followed by recovery. A number of patients examined afterward were found to be free from recurrence; in the majority of the cases operated upon, the time which has elapsed since the operation is too short to base a conclusion upon.

MEDICAL SOCIETIES

American Medical Association.—We are indebted to the *Journal of the American Medical Association* for the following interesting report of the Section on Practice of Medicine, at the meeting, held on June 8 and 9, 1893, at Milwaukee, Wis.

Dr. H. D. Didama, of Syracuse, N. Y., reported some

BRIEF CLINICAL MEMORANDA.

a. He stated that saliva is an excellent substitute for olive oil, glycerin, cosmolin, or other substance, as a lubricant for catheters. Although containing bacteria, saliva is not septic, and is always at hand.

b. In preparing hemorrhoids for injection he anesthetizes by means of ether or the A. C. E. mixture, and follows by digital dilatation of the anus. He then brings down the hemorrhoids, ligates those with small pedicles, tying with a bow knot, and then injects the material to be used.

c. He recommends the following facile reduction of prolapsed hemorrhoids: The patient is placed on his back, with his knees drawn up. Cocaine is applied to the hemorrhoids, if tender. These are then thoroughly lubricated with vaselin, and with the tips of two or three fingers pressed up while the patient at the same time is directed to bear down. The hemorrhoids readily slip up into the bowel. The patient himself can perform this operation without the aid of a second person.

d. For the ready relief of lumbago, Dr. Didama has for ten years or more employed large dry cups over the entire lumbar region. Four cups are applied at once and the application is repeated. In fifteen minutes the pain is entirely gone. The relief is usually not only prompt, but also lasting. The blood is drawn from the painful muscles to the surface, and relief is afforded. The cups should be three inches in diameter and six inches deep. A tonic and alkaline diuretic may be given.

Dr. Billings, of Chicago, said that in the use of saliva as a lubricant the patient is in constant danger of infection. While always containing non pathogenic bacteria, the saliva frequently contains pathogenic and pyogenic bacteria also.

Dr. Denison, of Denver, called attention to the danger of transmitting tuberculosis by the saliva used as a lubricant, as the saliva frequently contains tubercle-bacilli.

Dr. Aulde, of Philadelphia, emphasized the rheumatic origin of lumbago, and suggested the use of potassium iodid, and the salicyiates, as well as the faradic current. He said that rhux toxicodendron is also of value in the affection.

Dr. MacLean, of Detroit, reported a case of supposed appendicitis that had ruptured through the lung.

Dr. Joseph Price said that appendicitis is one of the

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most troublesome conditions met with by gynecologists and abdominal surgeons. He believes the condition purely a surgical one and advises operation in every instance. The removal of the appendix in the intervals between the attacks is followed by a mortality of almost *nil*. The application of poultices and the administration of opiates are objectionable. In almost every case the adhesions are extensive, though in some very exceptional cases there are none.

Dr. Whittaker, of Cincinnati, said that he prefers the word typhlitis to appendicitis, and asserted that no physician would object to operation in cases in which ulceration is present. As some cases of typhlitis never have a relapse, it would be improper to operate whenever the patient complained of pain in the region of the appendix. The continually recurring cases should pass into the hands of surgeons.

Dr. J. Hoffman, of Philadelphia, said that of 18,000 cases with disease in the right iliac region in the German hospitals there was disease of the appendix in 91 per cent., and only 9 per cent. could be classed as typhlitis. He admitted the possibility of a case getting well without treatment, either medical or surgical, but under such circumstances the convalescence is prolonged.

Dr. McMurtry, of Louisville, stated that many cases of appendicitis are reported in the mortality lists as peritonitis, especially those occurring in males. Peritonitis is only a symptom, and usually of appendicitis.

Dr. J. B. Murfree, of Murfreesboro, Tenn., read a paper on

Diphtheria.

He said that the greatest number of cases occur between the ages of three and twelve, and but very few in infants. The disease may be transmitted by cows. The period of incubation is from two to five days. The severity of the disease is the greatest at the height of the epidemic, but the intensity of the fever bears no relation to the degree of the toxemia. The pulse is usually feeble and small. The prognosis is always unfavorable. In treatment, few remedies are of much avail and none is specific. Isolation and disinfection must be absolute. Antiseptic mouth-washes; astringent gargles; the swallowing of ice, pepsin, trypsin, etc., to destroy the membranes; tincture of ferric chlorid for the blood; mercuric or mercurous chlorid; alcoholic stimulants, especially large and frequent doses of whiskey, constitute a useful method of treatment.

Dr. Jenkins, of Iowa, stated that he applies topically, with absorbent cotton, a solution of ferric sulphate.

Dr. E. J. C. Minard, of Brooklyn, N. Y., read a paper on

Early Aspiration in Acute Pleuritis.

It was stated that the diagnosis of the condition is not always easy. Early aspiration was advised, with thorough asepsis.

Dr. Anders, of Philadelphia, stated that he regards the exudate of acute pleuritis as an inflammatory one, and only operates during the stage of febrile reaction when urgent symptoms appear, and then promptly. If, after the fever and pain are controlled the effusion does not become absorbed, he does not wait longer than a week or ten days, but removes the exudate by aspiration, withdrawing small amounts at a time, in order to avoid dangerous sequelæ. This is repeated every couple of days, until the tendency to recurrence is overcome. Sudden syncope may follow the removal of a large amount of fluid.

Dr. Charles W. Purdy, of Chicago, read a paper on

The Detection and Significance of Carbohydrates in the Urine.

He confined his remarks mainly to the consideration of glycosuria, for the quantitative determination of which he proposed a new test.

The test solution consists of copper sulphate, 48 grains; pure potassic hydrate, 144 grains; strong ammonia, U. S. P., 9 ounces; glycerin, 6 drams; distilled water to 20 ounces. It was said to be stable and reliable. Some of the blue solution is placed in a vessel and the urine is dropped in from a buret, until the blue collor dispappears, when the amount of sugar present may be estimated.

In the discussion of the Brand method of treating typhoid fever, Dr. Chr. Sihler, of Cleveland, insisted that the cold water treatment of typhoid fever can, should, and will be carried out in private practice. Over five thousand baths have been given under his supervision without difficulty. The objections are:

1. That it is not pleasant to the patient; still patients are usually willing to undergo the discomfort in order to increase their chances for life.

2. Four out of five of our patients will get well without it. The bath can readily be given by a member of the family, although it is better given by a trained nurse. Dr. Sihler has a tub five and three-fourths feet long, two feet wide, and sixteen inches deep. The temperature of the first bath is 88°, cold being applied to the head and friction being employed. The second bath is given at a temperature of 84°, and successive baths at 80°, 76°, and down to 68°. The temperature should be taken every half-hour after the bath. If the patient is chilled, he should be wrapped in a blanket and have hot bottles applied to the feet. Dr. Sihler regards the chill as beneficial rather than otherwise. He uses less alcohol as his experience with the bath grows.

Dr. W. G. Thompson, of New York City, reported that he had treated 95 patients in three years by the Brand method, with a mortality of 7½ per cent. In 1305 cases treated by the expectant method, the mortality was from 20 to 30 per cent. In the French and German hospitals the mortality has, under the Brand method, been reduced to below 2 per cent. A patient with a temperature of 102° F. is given half an ounce of whiskey, and is put into the bath for fifteen minutes, being rubbed at the same time. He is then lifted into

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his bed, rubbed dry, and given a glass of milk. For a young child or weak adult a bath of ten minutes is better. Often three or four baths *per diem* will suffice, but in bad cases a bath should be given every three hours, day and night. For a nervous patient the initial bath may have a temperature of 90°. The temperature often continues falling after the bath. The occurrence of menstruation need not contra-indicate the treatment, and in one instance a patient was five months pregnant, and yet was given forty baths. A characteristic result of the treatment is the absence of nervous symptoms. The patient should void urine before entering the tub; otherwise he will be likely to urinate during the bath.

Dr. Herrick, of Chicago, said that within the past five years he had seen nearly one thousand cases of typhoid fever in hospital and private practice. He has observed that the pulse is invariably slow, notwithstanding the high temperature, and the average is from five to fifteen beats higher per minute in women than in men. A pulse over 106 in a male will require careful watching, and one of great irregularity is of bad omen. A slow pulse in typhoid fever is as characteristic as a rapid pulse in scarlet fever. Bradycardia is common in convalescence.

In Dr. Herrick's experience sweating is usually not present until late in the disease. In one case the eruption appeared on the face and over the entire body. In 20 per cent of the cases severe epistaxis was an early symptom. The temperature in the early days of the disease is very intractable. Pain in the abdomen is not a rare occurrence, and may suggest peritonitis. Albuminuria is common, as is Ehrlich's reaction, but the diagnostic significance of the latter is doubtful. Less mental disturbance follows intestinal antisepsis than other methods of treatment. Absolute rest in the recumbent posture is insisted upon, with liquid diet, sponging with cold, tepid, or warm water, antipyretics in small doses; opium for hemorrhage; surgery for perforation. The mortality in hospital practice was 17 or 18 per cent.

Dr. Anders, of Philadelphia, stated that he is a thorough advocate of the Brand method. He thinks that the chilly sensation produced by the cold bath is not beneficial. Such patients should at once be removed from the tub. Very weak patients should be held in one position while in the bath, to avoid exhaustion. Internal antipyretics are to be avoided in these cases, on account of the cardiac weakness as a result of degeneration of the heart-muscle. The chief value of the cold bath resides in its stimulating effect upon the nerve-centers.

Dr. H. A. West, of Galveston, Texas, presented a communication on

The Association of Diseases and Morbid Processes.

He spoke of the difficulty of ascertaining after death the exact morbid condition that was the immediate cause of death. A lowering of individual vitality as a result of famine, overwork, and intemperance is one of the main predisposing causes of various morbid conditions. A widespread disobedience of sanitary laws is the common origin of most of our epidemic diseases. In all acute infectious diseases there is a great tendency to involvement of the respiratory organs, and esepcially to croupous and catarrhal pneumonia. Cardiac disease is usually indicated by symptoms referable to other organs, as dyspnea, digestive disturbance, intestinal or renal derangement, etc. Derangement of the function of one organ will give rise to modification of associated functions elsewhere. If the liver be primarily involved there occurs stasis of the entire portal system, with gastric and intestinal catarrh, constipation or diarrhea, jaundice, etc. Inherited diatheses, as for example, syphilis, predispose to the development of tuberculosis. Scrofulous and gouty individuals are subject to tuberculosis and lithemia respectively. An inherited neuropathic constitution predisposes to various mental and nervous disorders. Especial attention was directed to the relationship between arterio sclerosis and cardiac and renal disease, and cerebral hemorrhage. The general increase in arterial tension puts an extra strain upon the sclerotic arteries, and rupture, with hemorrhage, readily occurs, with a resultant hemiplegia or even with a fatal result.

Dr. Denison, of Colorado, called attention to the association of fibrosis with tuberculosis. He expressed the belief that the so-called tubercles are the vaults in which nature imprisons the tubercle-bacilli to prevent their multiplication. Under the influence of tuberculin the process that results is not one of softening, but rather one of contraction, as indicated by a shrinkage in the size of the cervical glands revealed by actual measurement.

Dr. Scott, of Cleveland, contended that disease is not inherited. A certain state or condition that favors the contraction or development of certain diseases may, however, be transmitted from parent to child. As long as the general system is in a good condition the individual possesses a certain degree of immunity.

Dr. Webster, of Chicago, pointed out that disease may be transmitted by heredity, as, for instance, syphilis.

Dr. J. H. Kellogg, of Battle Creek, Mich., presented a communication on

The New Chemistry of the Stomach as a Means of Diagnosis and a Guide to Therapeutics, Based upon the Results of One Thousand Analyses of Stomach-Fluids.

He described a new method of analyzying the stomach-fluids, and proposed a new classification of gastric disease of functional character. The therapeutic indications of these conditions were outlined, together with the means by which these indications are to be met.

Dr. Charles Denison, of Denver, presented a new syringe for the injection of tuberculin, which he

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claimed was thoroughly aseptic and much better than the one usually employed. On one side the syringe is marked in minims, and on the other side in milligrams. Dr. Denison is in the habit of using a 1 per cent solution for doses under 20 milligrams and a 10 per cent solution for doses over 20 milligrams.

Pan-American Medical Congress—Section on Gynecology and Abdominal Surgery.—All members of the medical profession are cordially invited to attend the meetings of this section to be held in Washington, September 5, 6, 7, and 8.

The sessions promise to be exceptionally interesting, many valuable papers having been contributed. Those who may wish to read papers before this section and who have not yet sent in their titles and skeleton abstracts are requested to do so at once.

Papers have already been contributed by the following distinguished gentlemen from the United States and Canada: Drs. T. Johnson Alloway, Montreal, Can.; A. W. Abbott, Minneapolis, Minn.; J. M. Baldy, Philadelphia, Pa.; H. J. Boldt, New York City; Augustus P. Clarke, Cambridge, Mass.; Ernest W. Cushing, Boston, Mass; Andrew F. Currier, New York City; L. H. Dunning, Indianapolis, Ind; Geo. R. Deane, Spartansburg, S. C.; W. E. B. Davis, Birmingham, Ala.; Joseph Eastman, Indianapolis, Ind.; Geo. M. Edebohls, New York City; De Saussure Ford, Augusta, Ga.; William Gardner, Montreal, Can.; T. H. Hawkins, Denver, Col.; John R. Haynes, Los. Angeles, Cal.; Edw. W. Jenks, Detroit, Mich.; Jos. Taber Johnson, Washington, D. C.; Howard A. Kelly, Baltimore, Md.; Florian Krug, New York City; G. Betton Massey, Philadelphia, Pa.; Lewis S. McMurtry, Louisville, Ky,; R. B. Maury, Memphis, Tenn.; Wm. F. Myers, Ft. Wayne, Ind.; E. E. Montgomery, Philadelphia, Pa.; Robert T. Morris, New York City; Chas. P. Noble, Philadelphia, Pa.; Jos. Price, Philadelphia, Pa.; Geo. H. Rohe, Baltimore, Md; Jas. F. W. Ross, Toronto, Can; Chas. A. L Reed, Cincinnati, O.; I. S. Stone, Washington, D. C.; R. Stansbury Sutton, Pittsburg, Pa; T. Algernon Temple, Toronto, Can.; A. Vander Veer, Albany, N. Y.; W. B. Ward, Topeka, Kan.

W. W. Potter, Executive President.

Brooks H. Wells, 71 West 45th St., N. Y. City, English-Speaking Secretary.

New Teachers at the Beaumont Hospital Medical College.—At a Faculty meeting of the Beaumont Hospital Medical College, held recently, the following gentlemen were elected professors and lecturers:

Hugo Toeppen, M.B., Ph.D., Professor of Histology.

J. E. Alvord, M.D., Professor of Materia Medica and Therapeutics.

J. A. James James, M.D., Lecturer on Osteology.

Sebastian Joseph, M.D., Lecturer on Electro-Therapeutics.

NOTES AND ITEMS

Herpes Zoster as an Infectious Disease,—Th. von Wasielewski (*Corresp.-Biat. des allgem. aerztl. Ver. f. Thuringen*, Jahrgang xxi, No. 5), states that in herpes zoster appearances are to be found in epithelial cells of the papillary layer which can only be considered as protozoa. When the epithelial covering of a herpes vesicle is raised, and the affected skin scraped with a small scalpel, the tissue elements that are thus removed, examined under the microscope, show distinctly protozoa with independent movements.

Tamponing the Bladder to Arrest Hemorrhage after Suprapubic Prostatectomy, Etc.—Keyes (Boston *Med. and Surg. Jour.*) describes an original device for checking hemorrhage under these conditions, by means of a gauze pad to which a thread is attached and led through a perineal wound. Traction upon the the thread brings the pad firmly against the bleeding surfaces in the lower part of the bladder and about the vesical orifice. The pad can be removed when desired by means of a second thread which is led through the suprapubic wound. Cabot has modified this device in such a way that the gauze pad can be drawn out into a thin band, and so be removed more readily.

Dulcin, A New Synthetic Sugar for Diabetics.—The last number of *Notes on New Remedies* states that a new synthetic sugar, called "dulcin," or paraphenetol carbamide, is engaging the attention of Du Bois-Raymond and other physiologists of Berlin. Kossel has been carrying on experiments on rabbits showing that the drug may be taken in doses of thirty grains daily without any disturbance of the general well-being Dogs also have been fed with this substance for three weeks continuously, without any appreciable detriment to appetite or weight. The sweetening potency of this drug is as 200 to 1 of cane sugar.

Dr. Ewald has tried this substance clinically and upon persons in health. He reports that it is readily taken, the taste being acceptable to all. It proved to be especially suitable to diabetic persons, given to them in "the mannite combination, one to nine." Tablets containing two fifths of a grain of dulcin—equivalent to eighty grains of lump sugar—and one or two of these can be used by patients as the sweetening agent for coffee and other beverages. Ewald regards dulcin as free from toxic property in the quantity that is liable to be taken.

Removal of the Seminal Vesicles.—Since Ullman (Boston *Med. and Surg. Jour.*) removed both seminal vesicles for tuberculous disease, by Zuckerkandl's method—which consists in exposing the prostate and base of the bladder, by dividing the anterior at-

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tachments of the rectum and then freeing it from the prostate and lower part of the bladder, Roux has reported two cases in which for tuberculous disease he has removed one seminal vesicle, together with the spermatic cord and testicle of the same side—through a lateral perineal incision, reaching the vesicle by a dissection carried upward between the prostate and the rectum.

Dr. George W. Gay, of Boston, in May, 1891, removed the right seminal vesicle, through a lateral perineal incision (similar to that practiced by Roux), for cancerous disease thought to be primary in the vesicle. Six months later the wound, which had healed well, reopened; and examination revealed a hard mass, about the size and shape of the forefinger, in the site of the seminal vesicle which had been removed.

Villeneuve reports a case in which he removed one seminal vesicle by exposing the spermatic cord outside the inguinal canal, and by freeing and pulling on the cord until the seminal vesicle was sufficiently brought down to be reached and excised.

American Surgical Association.—At the meeting of this Association, held at Buffalo, N. Y., May 30 to June 1, 1893, the following officers were elected for the ensuing year.

President—Dr. J. Ewing Mears, of Philadelphia.

First Vice-President—Dr. Roswell Park, of Buffalo.

Second Vice-President—Dr. Lewis S. Pilcher, of Brooklyn.

Secretary—Dr. J. R. Weist, of Richmond, Ind.

Treasurer—Dr. John B. Roberts, of Philadelphia.

Recorder—Dr. DeForest Willard, of Philadelphia.

Member of Council—Dr J. Collins Warren, of Boston.

Chairman of Committee of Arrangements—Dr. I. M'Lane Tiffany, of Baltimore.

The following were elected to membership:

Drs. H. S. Burrell, of Boston; Perry H. Millard, of St. Paul; Albert B. Miles, of New Orleans; Samuel J. Mixter, of Boston; John W. Elliott, of Boston; John Parmenter, of Buffalo; J. McF. Gaston, of Atlanta.

To Honorary Membership—Prof. Carl Gussenbauer, of Prague.

The next meeting of this Association will be held at Washington the first Tuesday of May, 1894.

The American Girl as She Sometimes Is.—This young compatriot of ours no longer laces herself to breathlessness and a red nose and a pimpled forehead, pushing what flesh there is into regions where it makes deformity; she wears corsets, but only to outline and partially support, never to press or pinch, and thus her digestive organs are kept free to do their work and assist in preparing the rounded and velvety surface, the glow in the eye, the blush upon the cheek, the dye of the soft lips; for, unpoetical as it appears, the laboratory of beauty is in the stomach. In addition to all this, the American girl is no longer ashamed of her foot. She used to think it a disgrace if she wore a larger shoe or boot than a No. 2½; if she wore fours, she managed them; if she wore fives, she hid her foot. Now she understands that is is a law of statuesque beauty that a body should have an extremity apparently equal to its support—a woman a foot big enough to stand on, and *bien chaussee, bien gantee*, she never dreams of lengthening her skirt because her shoe is a six or seven, or of keeping her hands out of sight because they did not stop growing when she was ten years old. Owing to this last act of wisdom she can walk with freedom where she will, without pinched feet or any of the discomfort that urges her to sit still; and thus she takes with delight the exercise which does so much for her, which fills her lungs with fresh air and oxygenates her blood, and gives it all its life and sparkle wherever its effects are visible. After all, it is common-sense, the appreciation that nature says how much to eat and what to wear, that has reformed an ailing and early withered woman into a beauty of the old Greek type.—*Harper's Bazar.*

The Conduct of A Medical Life.—Mitchell, in the *University Medical Magazine*, publishes two lectures in which he says among others: "Character is the true and sure object of a rational existence. Back of this character must be a creed. The practice of medicine is a profession, not merely a business. He who looks upon it commercially, and only thus, is apt to fail of even the mere financial form of success, because it is the peculiarity of our mode of earning a livelihood that it is not and cannot be regarded as a mere business. The more we study the lives of exceptionally successful physicians in all ages, the more clearly will we come to see that the brilliant triumphs have fallen most often to those who had the highest ideals as to what they were dutifully bound to give, rather than what they were in return to get. I am fond of saying that in our work we sell what neither we who sell nor those who buy can weigh or measure. We have no public to which we bend with abject submission, as does the lower newspaper man, most timid of the reptilea; no judge or jury listens to us; no press or public looks on to applaud or condemn. What we do, neither patient or his friends can fully understand. One silent auditor makes up our moral accounts. That we live and are to live very largely a life of isolated self-judgment, that neither scale nor measure approves the amount and integrity of what we sell—this, I think, should make us doubly careful. I want you to go hence with unattainable ideas of what you mean to make your lives; the higher the better. At all events, have and hold distinct conceptions as to the qualities which make men great in the higher manhood of medicine, and acquire them now. The world may make strange havoc with your views when, as years go on, you are to be guided by them in the every day work of life. But he is to be pitied who, when young, having no ideals of duty, waits for opportunity to generate a code of conduct."

The New York City Health Department and the Diagnosis of Diphtheria.—The department has recently issued the following circular of information concerning the use of bacterial cultures by the health department for the diagnosis of diphtheria:

Recent investigetions have shown that a considerable proportion of pseudo membranous and exudative inflammations of the throat and upper air passages, commonly considered as diphtheria and having the anatomical appearances found in diphtheria, are not true diphtheria. These cases may be called false diphtheria.

It has also been shown that a considerable number of cases considered to be false diphtheria are really true diphtheria. While in true diphtheria the mortality is very high and the danger of transmission to others is great, in false diphtheria the mortality is low and the danger of infection slight. The diagnosis between true and false diphtheria can be made by bacteriological examinations within twelve hours, while without their assistance it is difficult or impossible.

The health department is now prepared to make use of bacterial cultures for diagnosis in all cases of suspected diphtheria occurring in the city, and desires that in every case either the physicians should themselves make the inoculations or should authorize an inspector to make them. They should be made in every suspicious case at the earliest possible moment. It is only in this way that the full benefit of a positive diagnosis is obtained, for during convalescence the specific organisms often disappear from the throat. The inoculations are made by gently rubbing a cotton swab against the throat, and then drawing it over the surface of the culture medium. When the physician desires to make the culture himself (and this is usually the better plan, for it can be done earlier and is more agreeable to the family), he can obtain, free of cost, a culture tube and swab and the simple directions necessary for their use at any of the apothecaries' whose addresses are given below. After the inoculation the tubes are to be returned at once from whom they were obtained. The tubes will be collected by the department every evening. If, on the other hand, the physician desires an inspector to make the inoculation, he is requested to state this when the notification of the case is sent to the department.

The diagnosis will be ready in every case by noon of the following day. The attending physician can obtain this immediately by telephoning to the laboratory (tele phone number, 1191 Spring), or, when this is not done, he will be notified by mail.

Cases which prove to be false diphtheria will not be visited by the department. Cases, on the other hand, which prove to be true diphtheria will be subjected to the usual rules and regulations covering contagious diseases.

The culture tubes and swabs can be obtained of the following apothecaries: Fraser, 138th Street and Tnird Avenue; Spear, 125th Street and Eighth Avenue; Dorn, Ninety-Third Street and Ninth Avenue; Doughter, 411 West Fifty-Ninth Street; Rupp, Thirty-Sixth Street and Ninth Avenue; Proben, Twelfth Street and Second Avenue; Ottiwell, Ludlow and Broome Streets; Marsh, 125th Street and Madison Avenue; Barnes, 110th Street and Madison Avenue; Hoypendorf, Sixty Seventh Street and Third Avenue; Shoemaker, Forty-Second Street and Park Avenue; Fraser & Co, Twenty-Nicth Street and Fifth Avenue; Bigelow, Eighth Street and Sixth Avenue; Laboratory, 42 Bleecker Street.—New York *Medical Journal.*

The American Association of Genito-Urinary Surgeons has elected officers for the ensuing year as follows:

President—Dr. George Chismore, of San Francisco.

Vice President—Dr. L. Bolton Bangs, of New York.

Secretary and Treasurer—Dr. John A. Fordyce, of New York.

Member of the Council at Large—Dr. Robert W. Taylor, of New York.

Increase of Lunacy in Ireland.—Recent reports of the medical superintendents of the district lunatic asylums in Ireland invariably agree as to the extent to which insanity is increasing in various parts of Ireland (*Brit. Med. Jour.*). For example, to take the Cork Asylum, we learn that 277 new patients were admitted during 1892, or nine over the average of the past twelve years, and, of this number, 77 were upon admission classed as incurable. In Killarney Asylum, also, the number of cases of lunacy admitted was the highest on record. Other countries tell the same tale, but the result appears more noticeable in Ireland, in consequence of a diminishing population. The medical superintendents speak strongly as to the evils of intemperance the offspring of drunkards very often suffering from insanity, idiocy, and epilepsy.

The Suppression of Information About Cholera in France.—Surgeon Fairfax Irwin, of the United States Marine Hospital Service, reported in the *Abstract of Sanitary Reports* for June 16, that the authorities of Marseilles had not only refused him the opportunity of inspecting the records, but suppressed everything relating to cholera, and that the newspapers were not permitted to publish the causes of deaths. The *Medical Week* for June 16 independently corroborates this report, stating that both the local and the central authorities seem once more to be endeavoring to conceal the truth, or at any rate to hide it under all sorts of designations. A rapidly fatal diarrheal disease has appeared in a number of the maritime departments of France, but not a single systematic bacteriological examination has been made. The course of concealment and perversion is in direct conflict with the agreement made at the recent sanitary conference at Dresden, and, though the agreement has not yet been ratified, it has been accepted by the various signatory powers, one of which was France. Perhaps if our health authorities declared France infected with cholera, the local authorities would realize their duty.

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The Medical Corps of the Army.—It is reported that Surgeon General Sternberg, with the approval of the Secretary of War, has planned courses of special instruction for newly appointed medical officers of the army, to be given in the Army Medical Museum (N. Y. *Med. Jour.*). The instruction is to be to a certain extent what a post-graduation course in medicine would naturally be expected to be—that is, more or less in continuation of the studies pursued by medical students before receiving the degree—but in some respects it will probably be virtually in new studies, for even in the best of our schools some branches of learning that are closely allied to medical knowledge are so lightly touched upon that they are practically a terra incognita to the young medical graduate. But, besides supplementing the youthful assistant surgeon's strictly professional education, the courses contemplated will include upon the business affairs of a military medical officer's daily life, such as his relations to the soldiers and their families and to his fellow officers, both of his own corps and of the army in general, the customs and needs of the service in such matters as making out reports, and numerous other details the knowledge of which there has heretofore been no means for the young medical officer to acquire save by chance of observation or by asking questions.

It is wonderful that in the absence of such a school the medical officers of our army so readily got the run of their duties and prerogatives during our last war, but much time could have been saved if it had been in existence. When the war was over and the army was reduced to the dimensions of a mere nucleus, it would probably have been difficult to find suitable quarters that the Government would have consented to put to such a purpose as that of giving special training to so small a body of men as the medical corps of the army, but now that we have the Army Medical Museum that obstacle seems to be done away with. There can, we think, be no reasonable doubt that the Army Medical School will prove to be a powerful factor in increasing the efficiency of the army medical service. Its design is exceedingly creditable to the new surgeon general, and he is to be credited also, we learn, with having resolved upon a most desirable change in the system of distributing his officers to stations; instead of continuing to send the young men to the plains to work their way up through tedious years of humdrum service to stations where there is something going on that is of interest to them, Surgeon general Sternberg will endeavor to give each of them a considerable period of service at a post where attendance at the great civil hospitals, the college laboratories, the medical libraries, and the meetings of medical societies may aid him in fitting himself for the second examination. While the opportunities of the older officers should not be curtailed, certainly those of the younger ones should be enlarged, and we know of no better way of accomplishing that end than the surgeon-general's plan of stationing junior medical officers.

RAILROAD NEWS

To Foil Train Robbers.—Major E. B. Pope, the genial Western Passenger Agent of the Chesapeake and Ohio at this point, has, after much worry, and cudgeling of the gray matter in his cranium, evolved a scheme whereby the wily train robber will be foiled in his every attempt to get into an express car. This invention is nothing more nor less than a double lock, eithey key or combination, or two combination locks. One of these is ordinarily to be made use of by the agent. No. 2 is to be used only on occasion of attempted robbery. Its combination the agent is not to know, but on an alarm of robbers his duty will be to throw the combination, which additionally locks the safe and at the same time guards lock No. 1. After the lock of No. 2 is thrown the safe cannot be opened until it reaches its destination, where the resident agent is in possession of the combination.

Major Pope filed application for a patent.

Special Railroad Rates for the First Pan-American Medical Congress to be held at Washington, D. C, September 5th to 8th Inclusive.—The Chesapeake & Ohio Railway, from Cincinnati or Louisville to Washington, D. C., is the quickest, most picturesque, interesting and comfortable line between those cities. Their trains are vestibuled throughout, lighted by electricity and carry the latest pattern of through first class coaches, Dining Cars and Sleepers.

The scenery along the upper Ohio and Kanawha Rivers, through the gorgeous and canons of the New River, among the Peaks and Valleys of the Blue Ridge and Alleghaney Ranges and over the fertile plains and historic battle fields of Virginia constitutes a kaledioscopic panorama that for variety, beauty, grandeur and historic interest is unequaled in this country.

Ths rates of fare will be the same by all of the lines and while they have not been agreed upon, they will positively not be more than one and one-third fare for the round trip. The one way rates ars as follows from St. Louis $19.25, Chicago $17.50, Cincinnati $14.00, Indianapolis $16.00, Louisville $16.00.

Tickets will be sold at those places September 1 to 4, inclusive, good to return leaving Washington as late as September 12. Ask for your tickets "via the Chesapeake & Ohio Railway.

If you will advise me what day you will leave any of the places named and whether in the morning or evening and how many berths you will want I will reserve them through to Washington for you.

Write for a copy of "Virginia in Black and White."

E. B. Pope,
Western Passenger Agent, C. & O. Ry., St. Louis.

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MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XXVIII ST. LOUIS, JULY 29, 1893. NO. 5.

ORIGINAL ARTICLES

Masked Epilepsy.

BY ALEXANDER B. SHAW, M.D., ST. LOUIS, MO.

Read before the Missouri State Medical Society, May 17, 1893.

To quote the language of that Master Clinician Charcot, "The term epilepsy conveys to non professional persons, and we must confess it, to many medical men also, the notion of a disease characterized by convulsive attacks, generally of short duration, and attended with *loss of consciousness*, swelling of the face, distortion of the mouth and eyes, immobility of the pupils, and a good deal of foam at the mouth, tinged red with blood."

The condition just described would be readily recognized as one of epilepsy, but it only describes one of the many forms frequently observed by neurologists and which, however different they may at first sight appear, are but differing expressions and not degrees of the same disease.

Epileptic seizures proper have been divided into grand mal or haut mal and petit mal, otherwise frequently described as epileptic vertigo, epilepsia larvata or masked epilepsy.

The terms epileptic vertigo or vertiginous epilepsy are to the english speaking physician extremely misleading and calculated to cause him to suppose that giddiness, dizziness, or vertigo as experience in either gastric disorders, menieris disease, or gross cerebral lesion is a part of the symptom complex styled vertiginous epilepsy, when in reality what is meant is a state of mental unsteadiness, astonishment or ecstasy, and at least a partial loss of consciousness with automatic action. As a typical case of epileptic vertigo Charcot relates the following "A gentleman came one day to consult me, during the short time he remained in my office he was seized with *vertigo* characterized by *jerking bursts of laughter*. The fit lasted a few seconds only and he immediately recovered himself; but he seemed very much surprised when I asked him why he had laughed; he was not conscious of what he had just been doing. The convulsive attacks to which he was subject were almost always ushered in by *these vertiginous seizures*." Surely as we understand the term vertigo it was not present in the foregoing case. The expression *masked Epilepsy* however conveys the idea that the epileptic seizure is for some reason not clean cut and well defined, that it is hidden, or disguised, not easily recognized and because such is the case I prefer to use the caption I do for this paper.

Notwithstanding the fact that loss of consciousness is generally conceded to be an essential feature in any given case of epilepsy, I am inclined to believe that in many cases imperfect loss of consciousness with automatic action does constitute a minor seizure of genuine epilepsy, liable to manifest at any subsequent period all of the possibilities of epilepsy and especially prone to do so in the psychical equivilant of the grand mal or any of the other forms of epilepsy known as psychical epilepsy or epileptic mania which constitutes the most dangerous lunacy known.

The following cases from my case records will quite perfectly indicate what I call masked epilepsy and some of them will, I presume, recall in your minds similar cases coming under your observation.

CASE I. M., age 16 years. Nurse girl, two or three times each week has sudden momentary general muscular contractions especially involving the extensors—frightened look, invariably drops any article that she may be holding, no apparent loss of consciousness, if it does occur its duration is unappreciable, subsequent history is unknown.

CASE II. M., age 3 years, five or six times every day she suddenly seizes any object near which she may chance to be, becomes pale, rigid and silent, and remains so for probably 15 seconds, then draws a long breath, sobbing in character and at once goes about her play, she has always been a remarkably healthy looking child.

During her eighth year she had a well marked epileptic fit and has had one about every six months since that time.

CASE III. G., age 5 years, every week or ten days suddenly begins to stagger as if about to fall, and says I can't see, I can't see, the body is covered with profuse perspiration. The attacks last nearly a minute. He always insists on lying down and goes to sleep immediately. These attacks ceased to recur when he was abou 9 years of age, but from that time until he was in hi thirteenth year he wetted his bed every two or thre

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weeks notwithstanding the most painstaking efforts to prevent such a mishap.

Case IV. A. R., youth of 17 years, sudden attacks of severe pain in the epigastric region, followed immediately by mental confusion lasting about two minutes during which he answers yes to every question. Does not appear to be unconscious but has absolutely no recollection of anything which was said by himself or others or that occurred from the time he complained of the pain, until with a sudden start he exclaims "what's wrong" or "what's the matter.

Three times during as many months this young man left his home to go to his father's store, which is about two miles away, and strayed off to some other part of the city, and would suddenly become conscious of the fact that be was in a locality quite remote from that for which he had started.

Subsequently he had two well marked epileptic convulsions with complete loss of consciousness. Under treatment these attacks ceased to recur for five years when he married and two months afterwards without adequate cause became very much excited early one morning, left his place of business and wandered about the city aimlessly and without any recollection of where he had been for a period of nine hours.

Case V. Mrs. R., age 36 years. Married, mother of one child, for sevaral years has been subject to attacks of lancinating pains in the left mammary region. After suffering intense pain for from 30 to 60 minutes she would suddenly take a few prolonged deep inspirations of which she retains no recollection, and becomes very drowsy for 10 or 15 minutes, after which she would appear quite well. Such attacks recurred about every 5 or 6 weeks for some years and suddenly were replaced by typical epileptic fits and for the last eight years she has, notwithstanding active and protracted treatment, been the subject of frequent attacks of grand mal.

Case VI.—Mr. A. B. C. Railway engineer, on two occasions during six months took his wife to a theatre and although seemingly very much interested in and pleased with the play, suddenly and unconsciously left her side, went home, retired without undressing, and on awakening the next morning would have no recollection of having left the theatre. On several occasions, once while reading aloud, once while writing a letter, and once while in a street car he suddenly turned to his wife and began arraigning her for imaginary wrongs in a very abusive manner. His actions and language being such that those present would be lead to believe him to be a grossly injured man. After a time, on one occasion lasting two hours M. C. would burst into tears and cry like a child and then seemingly return to his normal self and persistently assert that he had no recollection of what had occurred or where he had been. At the commencement of these abusive outbursts he staggers like an intoxicated man. Some years ago his head was injured in a railroad wreck. Upon my advice this man was discharged from his position, which was that of engineer on a passenger engine. Subsequently, he without provocation, attacked and almost killed his wife, and at last accounts he was an inmate of one of our state lunatic asylums.

Case VII.—Mr. F. M. C. Railroad employee, age 26 years. Nearly two years ago began having seizures beginning with pain in the lumbar region which would gradually extend up to the occiput, then suddenly the whole head pained him intensely and without falling he would become unconscious of having suffered and remain so for hours. During this lapse of memory he would at times request those about him to read to him and would comment quite rationally on what was read or said. At others he would become delirious and even maniacal. Suddenly consciousness would be restored. He would then feel dull and nervous but could not recall anything that had been said or done from the time that the pain became so intense in his head. A late note shows that the seizures became more frequent and the last one of which I have any knowledge was followed by a delirium of a weeks duration.

From the writings of Morel, Giblois, Renandin, Belod, Legrand du Saulle, Falret, Trousseau and others of more recent date, the profession has become quite familiar with the facts that a temporary paroxysm of insanity may replace the epileptic seizure, and that in such cases the insanity is due to the same pathological substratum that produces epilepsy in any of its protean forms.

That there is a variety of insanity characterized by many of the distinguishing psychical manifestations of epilepsy in which no evidence existed to prove a previous epileptic seizure. That there is a condition named *Epilepsie Larvie or* concealed epilepsy by Morel in which there may develop maniacal delirium, irresistable impulse to the perpetration of acts of wanton destruction of property, taking of life or encontrollable disposition to do violence to the laws of both God and man, and that without even the faintest trace of a provocation, rationally speaking for the insane deed. But I fear that as watchmen on the walls of the citadel of mental as well as physical health we are disposed to view with too few misgivings as to the possible future of cases, that present such symptoms as sudden lancinating pain, or pain always beginning at a given point and, while gathering intensely, traveling in a direction or involving an area defined by a previous experience of a similar or, I should say, like character, or sudden lapses of memory be they ever so transient, or periodical attacks of forget fulness, sudden and careless changes in deportment, or disposition, strange and indescribable sensations. Hallucinations of sight or smell, or repeated attacks of vertigo with or without profuse perspiration, or marked but transient periods of Moroseness or Sullenness or tremor, or sudden stiffening of the whole body when unaccompanied by other symptoms pointing to some well recognized pathological condition of some organ, organs, or of the whole body that explains satisfactorily their origin or cause. For many of these cases are epilepsy

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in its incipiency from which may and frequently will develop sooner or later the grand mal or the furor epilepticus resulting in violence, vandalism, homicide, paracide, uxorcide etc. to be followed by the terrible pangs of remorse for the horrible crime committed, or the suicides grave.

The Need of Special State Provision for Epileptics.

BY JOHN PUNTON M.D, KANSAS CITY, MO.

Professor Nervous and Mental Diseases, University Medical College, Neurologist to all Saints and Kansas City, Fort Scott, Memphis Railroad Hospitals, Special Lecturer Western Dental College.

Read before the Missouri State Medical Society at Sedalia, Mo., May 17, 1893.

The age in which we live is eminently Philanthropic in character.

In no other period of the worlds history has so much genuine practical good been accomplished for the alleviation of human suffering than the present one.

The pride and boast of our nation to-day lies in our numerous and well equipped hospitals and beautiful eleemosynary institutions. Not even the old world can vie with or rob us of this proud distinction.

In almost every state of our grand Republic rich provision has been made for the deaf and dumb, the blind, the feebleminded the insane and indeed every class of disease and injury.

No one who is fully acquainted with the facts or familiar with the history of our many great and noble public benefactions can justly accuse us of lack of sympathy or charity or even indifference to the special needs and claims of the more unfortunate of our race.

Admitting this to be true nevertheless it cannot be denied that there is still in our midst at least one large class of poor unfortunates which a generous public so far has failed to make for them the needed provision they so richly deserve, I refer more especially to that large and growing body of neglected indigents known as epileptics.

This omission arises not because of their unworthiness but chiefly because these poor creatures have been and are still wrongly classified in the social categories.

The subjects of epilepsy have ever been popularly classed with—the lunatic or pauper when they may be neither, although it is true many become both from the cruel force of their environment. It is therefore certainly within the province of the medical profession to champion their just cause and take such action as is necessary to rectify such errors and secure if possible for them the needed state provision which modern medical science and art clearly demonstrated as being the most expedient and wise for their proper welfare. In the comprehensive range of diseases of the nervous system there is probably no subject of more vital interest to the well being of all classes of society than epilepsy. Viewed from whatever standpoint no other symptom or disease at all approaches it (unless it be insanity itself) in the utter helplessness of the individual, in the liability to serious injury during an attack as well as the deep distress and untold anxiety it brings to the relatives and friends. The peculiar misfortunes of these dreadfully afflicted individuals are perhaps best known only to those who by virtue of their special relationship (either professional or otherwise) are brought constantly in direct contact with them. No physician can for any length of time be professionally associated with their distressing circumstances without becoming greatly impressed with their extreme need of sympathy and generous support.

Indeed it may truly be said that no other class of patients which we are called upon to minister has such just claims upon our sympathy and influence to intercede in their behalf as these poor unfortunate epileptics.

It is for this reason that I am induced to make this special appeal for state protection, believing that your own knowledge of their cruel fate is sufficient evidence to enlist your sympathy and hearty co-operation in such a worthy movement. The clinical study of epilepsy reveals the fact that it presents every degree of mental and physical variation from a slight vertiginous thrill and muscular twitch to the most pronounced type of maniacal frenzy or hopeless dementia. This very wide range of mental and physical phenomena admits of a crude classification into several different types or classes which are easily recognized.

1. There are those whose attacks occur very infrequently and less severe and consequently are portially or wholly able to provide for themselves, at least for a varying length of time, but which without treatment tend gradually to become worse.

2. Those in which the paroxysms occur quite frequently, but are not very severe although their continual recurrence seriously interferes with their filling any important situation in life.

3. Those who are subject to very severe attacks, but who have ample warning or auræ of their approaching danger and are thus enabled to secure for themselves a place of safety during the attack although in the interval which greatly varies in duration they are apparently strong, able and willing to work, yet no one cares to trust them.

4. Those in which the attacks are both frequent and severe have no auræ and whose mental faculties have gradually become deranged and during the attacks are actually insane.

Thus it will readily be seen that all of these different stories present their own special features, yet it must be observed that all have several in common.

For instance none of them know when, where or in what manner they will succumb to an attack, consequently their future is always full of uncertainty. Then again epilepsy is no respector of persons, for we find that all of these varied forms may be found in the ranks

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of all classes of society from the prince in his gorgeous palace to the peasant in his humble cottage.

It is not however for the epileptic who is surrounded with all the comforts and luxuries which kind friends and wealth can furnish that I desire to make this special plea but more especially for those poor creatures who are either friendless or poor or both, those who by virtue of their extreme poverty, lack the necessaries of life or who are only portially provided for and consequently are sooner or later referred to the lunatic Asylum jail, poor house or kept in some wretched home until death releases the struggle for existence. While it is true that many of these individuals are subject to severe attacks and at such times are more or less unsafe yet in the interval they are able and willing to work but no one is prepared to employ them and thus they are unable to provide the living they could otherwise make for themselves.

Without fear of exaggeration it is safe to assume that there are at least 1,000 epileptics of all grades in this our own state of Missouri. Of these scarcely one third is now under state or county control or protection.

Generally speaking only those whose attacks are very frequent and severe and by virtue of their very continuance great mental changes have ensued are found in our general hospitals and Asylums.

Many of these would not be there at all were their relatives so situated that they could properly care for them at home.

It has always seemed to me a great injustice to place these poor creatures irrespective of their special symptoms or type of disease in the wards of an insane asylum to become the constant companions of lunatics, for very few if any of our state asylums have special wards or buildings devoted exclusively for epileptics, hence a double evil is imposed to the epileptic on the one hand and the convalescing insane on the other.

Moreover the differences in degree of the nature and character of the symptoms in ordinary epilepsy admits of their distribution throughout the various wards of such institutions, for it would be cruel indeed to place a case of Petit mal in a word with the more violent and chronic insane. There is no doubt that the combined association of these two classes of unfortunate indigents is harmful to both.

In those hospitals where by chance special wards for epileptics are provided the plan also possesses many disadvantages chief of which perhaps is that it couples the milder types of epilepsy to be constantly associated with the more violent ones.

This is diametrically opposed to the best methods of treatment as it always proves harmful to the former by their dreadfully depressing surroundings. If the epileptics now inmates of the various state and county institutions were removed from them into a specially prepared hospital or colony both the epileptic and the insane would be greatly benefited.

As it is, many of them are now in very poor accommodations under no special medical care and little or no protection whatever.

The subject of special state provision for epileptics is attracting greater interest and attention to-day than ever before.

In Europe it has taken definite practical root in the establishment of special hospitals and colonies. During my recent tour I was pleased to find that in England the subject was being discussed in the meetings of the various medical societies which I attended and since my return I noticed in a recent editorial in the London Lancet on account of the establishment of a "House for Epileptics" as well as the organization of a benevolent movement to be known as the "National Society for the Employment of Epileptics."

The New York Medical Journal, June 1893, comments on it as follows: "This Society has been formed for the purpose of providing for needy epileptics who are able and willing to work a part of the time at least, but are practically debarred from obtaining situations an account of their infirmities.

In connection with it a series of cottages are provided each of which will accommodate from 10 to 20 epileptics. "The sexes will be separated and children and adults will be kept apart. The institution is to be conducted on a system similar to what has been so successful at the Bielefeld Epileptic colony in Germany.

Market gardening and spade and barrow labor will be among the initial industries but, as the colony extends, other pursuits and even some of the mechanical arts will develop."

"It is hoped that in this way there will be a prospect of self support, partial at first and growing with the growth of the institution."

"The colony or home will from the first be under medical supervision and without sectarian limitations."

"While it will be primarily for the benefit of the poor the home will extend its advantages to patients with financial means who will be received as boarders." The inauguration of such a grand and noble movement in every state of our own country is simply a matter of the near future.

In Germany there are no less than 10 institutions in active operation to-day whose sole mission lies in the care and treatment of epileptics the most notable of which is that at Bielefeld, near Hanover which is now self supporting.

From a beginning of 12 patients 25 years ago there is now upwards of 1,000 patients in the various departments of the colony.

It is gratifying to know that the good work has already had its beginning in our own country and the great need and utility of such institutions or colonies are now duly recognized as the subject is receiving more or less agitation in every state of the union.

Nothing however of a practical nature had been done until quite a recent date.

To-day at least three states viz. Ohio, Massachusetts and New York have already done their duty by making the necessary provision and to their honor let it be said that they enjoy the proud distinction of being the

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Pioneers in this beneficient enterprise. Among the most important of these movements so far perhaps is the rich provision recently made by the State Legislature of New York a full report of which can be found in the "New York Medical journal for January 14, 1893. In perusing this we learn that the state board of charities who had previously been appointed a committee to select a site and prepare plans for such a colony rendered their report.

In it they recommended the purchase of a tract of land in the Genesee valley about 3 miles from mount Morris in Livingston county of over eighteen hundred acres, together with plans secured from a competent architect showing general design and ground plans for new buildings to accommodate a population of at least 600 epileptics, with future increase, as was found necessary to suit the needs and demands of such a colony.

The objects are to secure a community for the humane, curative, scientific and economical treatment and care of epileptics exclusive of insane epileptics.

Dr. Bullard of Boston in a recent article on "What shall be done with chronic epileptics" says that the presence of epileptics among the ordinary community without any special protective provision is a standing danger not only to the patient but to other members of the community." This certainly coincides with the opinion of all who have given the subject much thought.

Every large city has these poor wandering epileptics on its streets and it is common for them to create sensational scenes during an attack.

Then again the advantages accruing from state surveillance of epileptics in the prevention of disease cannot be over-estimated. All are aware of the predisposing influences which belong to epileptic parentage and the promiscuous marriage and intermarriage of these individuals should not be allowed, indeed they should be governed by law. As it is they are allowed full sway and free access to all classes of society.

It is also well known that epileptics easily become the dupes of evil designing persons and it is an event of no rare occurrence for them to be taken undue advantage of by some vagabond. I could cite instances, of this as coming under my own observation, but surely this is unnecessary as doubtless you all have had a similar experience.

In order to fulfill our whole duty towards these poor creatures and to rescue them from their many immediate dangers it is necessary that we urge upon the state authorities the need of suitable state provision for them.

This work certainly belongs within the province of the medical profession and the initial step consists in directing and informing the several members composing the State Legislature as well the public in general what is actually necessary to be done for their proper welfare In referring to the relation of the medical profession to these poor unfortunates Dr. C. H. Hughes of St. Louis says in a recent paper:

"That the medical profession is humanity's earthly human providence and as such champions the cause of the weak and afflicted".

He also adds "that from a large experience with this unfortunate class I feel called upon to make a special plea in their behalf and believe that the sympathy which belongs to this great commonwealth of Missouri will be moved in their behalf. Many of these unfortunates in our alms houses and county asylums have fallen from high estates and their pitiable helplessness mutely pleads with our consciences to extend them sympathy and aid".

We should endeavor to influence public opinion to so use our ballots that parties and politicians so politic and inhuman as to sacrifice the mentally and physically maimed or ill in public hospitals and other eleemosynary institutions whom it is our special duty to guard and preserve."

Such words coming from one whom you all know and recognize as being in a position to know the special needs of these poor afflicted individuals should have its due weight and influence.

I trust the society will discuss this matter freely and after due consideration with your consent I will move that the president appoint a committee of 5 to take such steps as is deemed expedient and wise towards the consummation of this great and needed benevolence.

The Missouri School for the Blind.

BY M. H. POST, M.D., ST. LOUIS, MO.

An Address Delivered before the Missouri State Medical Society, May, 1893.

Mr. President and Gentlemen—I have asked the privilege of addressing you this morning, not upon some subject particularly connected with that branch of medicine which occupies my time, as an individual; nor yet upon a subject that interests us only as physicians: but rather upon one that interests us as citizens of the State of Missouri, or I might put it more widely, and speak of it as one that interests us as men, and as men that sympathize with those of our fellow men who are unfortunate.

I want to speak to you of the Missouri School for the Blind.

The usual idea is that Missouri has a Blind Asylum; but that is a mistake. There is not a "Blind Asylum" in the United States, and one of the things I hope to accomplish this morning is to impress on your minds that the institution is not an asylum but a school.

The popular name has done the school, or rather the blind children of the State much harm.

The directors find that many people suppose that it it is a place where the blind are kept, because they are helpless, useless and in the way in the ordinary walks of life; that it is a place of gloomy confinement where these unfortunates are sent in order that their presence may not annoy and interfere with the seeing

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Parents do not understand that there their children may be made stronger and happier by being taught to write, so that they may correspond with other blind people and with the seeing; by being taught to read so that the delights of history and literature may be open to them; by being taught music, not simply to hum a ballad or play a tune by ear, but so as to understand music thoroughly; study it under proficient teachers and become familiar with the works of its great masters; that there their bodies may be made healthy, strong and graceful by calisthenics and training in the gymnasium; that they may be made useful and helpful to others by being taught "handicraft," the girls to do embroidery, hand or machine sewing, the boys carpentry, broom making, chair seating, etc.

The Board of Managers wish that you, the physicians of the State, would bear this in mind, do what you individually can to counteract the idea that it is an asylum, spread the idea that it is a school, and see that no child having the requisite health and intelligence, and of school age, shall be allowed in our State to grow up without enjoying the blessings which such an institution bestows.

Scholars are admitted to the literary department between ages of nine and twenty five years; their tuition and board cost them nothing, and if they are too poor to clothe themselves properly the county from which they come frequently supplies this deficiency. There is no age limit in admitting to the *Handicraft Department*, but students of this department only must find their board and lodging elsewhere than in the school building.

Nothing was done toward the education of the blind till about a century ago.

In 1784 Valentine Huay established in Paris the first school having this object.

Attempts were made to teach them to read by the use of peculiar raised lines, which stood for certain letters. Something was accomplished in this way; but the real education of the blind began with the introduction of the point systems. About seventy years ago Louis Braille, a blind student of the Paris school, proposed substituting a combination of raised points for letters and abbreviations, and soon gave what is known as the Braille system.

At present there are two general discoveries of raised letters, the line letters and the point systems. The latter being divided into the Braille and New York Point

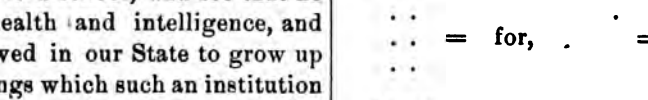
The first school for the education of the blind in *this* country was founded in Boston by Sam'l G. How, in 1829. Here the line letters were introduced in a somewhat modified form, and Boston is still their stronghold.

Our school was established in 1851 through which, in 1860, the Braille system was introduced into this country through the efforts of Dr. S. Pollak, and is probably the most perfect system the blind will ever have. About twenty-two years ago Wm. B. Wait introduced and has since advocated the New York Point.

This is a brief history of the development of the education of the blind by which in a little over a century they have been placed on almost an equal footing with the seeing.

In order that you may more fully appreciate the value of what our State offers them I would say that our school gives the same mathematical, literary and historical courses as the schools for the seeing. Classes have been taken into reading Latin; this, however, is so seldom desired that it is the exception and not the rule. I mention it only to show the completeness of the opportunity offered. That which will interest you most is their method of reading and writing.

In the Braille system, which we use, the letters and abbreviations are made by the same combination of six points arranged in two verticle rows of three each, each point having its place, and its presence or absence having a certain definite significance as



About fifteen years ago these symbols were put on the keys of the type-writer and when the keys are pressed the corresponding Latin letter is printed, thus they can write a letter that you and I can read. Some of them become quite expert and are able to write as many as seventy words a minute.

A much simpler instrument than the type writer, with which you and I are familiar, is the instrument now used by them for writing Braille. Instead of a key for each letter, abbreviation or musical sign, as one would naturally suppose, there are only six keys, one for each point, each key controling one point, and being pressed makes an indentation in the paper at its appropriated position, and by pressing any desired combination of keys and desired letter, abbreviation or musical sign is at once transferred to the paper.

Formerly this was done by placing the paper in what was called a slate (example) and with style the letters were worked out with laborious care; the result was very slowly obtained and when obtained was very irregular in its appearance. With this new instrument which I have described, one hundred words can be written in a minute, and the lettering has the precision and the beauty of the best printing.

This instrument is the product of the inventive genius of Frank H. Hall, Superintendent of the Illinois School for the Blind at Jacksonville. It is so simple and complete in its first production that it bears the unmistakable stamp of genius, and will probably never be much improved on.

This achievement was so brilliant that it seemed as if the blind could ask nothing more from this man; but a few months ago he startled us by another most brilliant stroke. He applied foot power to the machine and produced metal plates of anything we wished to print.

Putting the points in position by touching the keys with the fingers, then crowding against them by the use

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of a pedal, a soft pad covered by a sheet of metal, the points are embossed on the metal sheet, giving us a beautiful copper or tin, or some other kind of a metal plate, which when covered with the proper kind of paper and run through a clothes ringer gives as perfect an impression as the best type set up and managed with the utmost care.

About ten times as much can be printed in a given time with this simple though wonderful contrivence, as by the former method of printing by setting up type or using a printing press.

Our school is printing book after book and copy after copy of the same book. Our school owns by purchase, and the work of our pupils, almost all the standard literature of the English language, and thus the blind can become as familiar with them as the seeing.

They also have a stenograph which they can use, but the phonograph has superseded this instrument and it is now rarely used.

This, gentlemen, is what our State offers to its blind. There is a prejudice against the school among the people under the idea that it is an asylum and parents are unwilling to send their children to it. I would ask you to do what you can to set people right in regard to it.

I have asked you to listen to me, not that I might entertain you; but that I might put the merits of this Institution before you, and that each who hears the sound of my voice may feel it a part of his duty to let no sight less child among his patients or in his neighborhood, grow up devoid of the sunlight which this institution is able and prepared to throw into their minds and souls.

Remember the Missouri School for the Blind.

The Hysterical Disturbances of the Special Senses.

BY J. H. THOMPSON, M.D., KANSAS CITY, MO.

It is evident to those who have been in the active practice of medicine or surgery any length of time, that the most important prerequisite for the successful management of diseases is the diagnosis thereof, the prognosis may be doubtful and the treatment expectant, but a knowledge of the actual condition of the complainant is what we all strive to attain. Any thing that comes between us and our patient which tends to a false exaggeration or amelioration of the symptom, is our common enemy. The diseased condition, hysteria is the Bete-noire which meets us at the bedside, follows in through the hospitals and forever threatens our consulting rooms. From long association, we are well acquainted with this most remarkable and strange disorder, and, it is doubtful, if there is one within the sound of my voice, who cannot relate some interesting experience with this misnamed and undefined disease. Therefore, I take it, we are all interested in this subject, and a few observations and remarks on the hysterical disorders of the organs of special sense will not be out of place.

When I gave up the practice of general medicine and devoted my time to the treatment of the diseases of the eye, I congratulated myself on the idea that, the practice of a specialty was easy and satisfactory, because of the greater certainty in diagnosis, but I had not been long in my new field before I met my ancient enemy, as an acute suppurative meningitis, the story is interesting and will bear relating.

Mrs. B., a little nervous, black-eyed woman, was taken ill with measles and had, as a complication, acute suppurative inflammation of the middle ear. It was a particularly severe attack of otitis, which at an early stage involved the mastoid. The fever was high and the pain excessive, and I remember well the discharge was unusually offensive. Under appropriate treatment the patient was rapidly recovering, when I was suddenly called one night to see her, the messenger stating that she was dying. I found the woman in profound coma; neither the eyelids nor the mouth had been closed for hours and all the mucous membranes exposed were as dry as a braid. This condition came on gradually after a sudden access of pain in the head; the pulse was normal and the temperature slightly elevated.

In this case I did like many men do now, I hedged, but I must admit that I did not know whether it was meningitis or hysteria, at any rate I am afraid it was a disease that killed. The consultant made the diagnosis and in twelve hours the patient continued her convalescence. Such was an example wherein hysteria simulated an extremely grave condition and where a mistake would have imperiled the reputation of any man.

At that time a quiet general conversation at the bedside, in which the patient was not mentioned at all, led to a cure. To-day I am afraid that the potent suggestive remedy would, in all probability, be the preparation for an extensive operation on the head.

It will be observed that that was an exaggerated manifestation of the hysterical neurosis, and rarely met, but at the same time it is well known that the condition often occurs, appearing in some unusual form and producing such alterations in sight and hearing which may baffle the search of an acute observer. I have seen many cases of hysterical disturbances of vision which have not been limited to the gentle sex. Men may suffer from certain suggestive derangements of vision and hearing and I think the laryngologists will agree with me in suspecting an hysterical basis for some disturbances of speech.

The most wonderful case of hysterical amblyopia I ever saw, heard or read of was a young lady patient I had some years ago. She was totally blind, and the dingnosis, acute glaucoma, had been made by the family pnysician. The doctor summoned me early one morning to go immediately to her hotel and make a double iridectomy for acute glaucoma. That I refused to do until I had examined the case carefully and at my leisure. Consequently she was brought to my office on her way to the hospital. She did not have glaucoma nor any disease of the eye. To all appearances the eyes

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were healthy but she was absolutely blind, although she claimed that she could not discern light from darkness and I believed her; still, the pupils contracted to light. The girl was seventeen years old, healthy and robust. It appears that she became blind in one night and the parents stated that when they found her in the morning blood was running from her ears and her nose. The history of the case and the total absence of any objective symptoms of intra ocular disease very strongly suggested hysteria. I told her she would fully recover, that she had no disease of the eyes and certainly not glaucoma. I prescribed a placebo, but loudly insisted that the skin of the forehead and back should be daily irritated with the faradic brush. I never saw the patient again, but heard that in about three weeks she re covered her vision, as suddenly as she had lost it. A remarkable peculiarity of this case was in telling her she had not glaucoma; that she would certainly get well, and that an operation was beyond consideration. I made such an impression on her mind that the long importuning of her disappointed doctor, the advice of a surgeon who should have known better and the demands of her anxious parents could not persuade her into a double iridectomy, which would have scarred her eyes for life and would have secured a fee commensu rate to the brilliancy of the result.

Cases of this kind, of such a pronounced type, are not difficult to diagnose. The complete absence within the eye of disease of the nerve or retina makes the diagnosis easy, unless, by chance, such blindness follows an injury to the head involving the visual centers. Those who are interested in the subject and will study its literature will find that hysterical dimness of vision is not at all uncommon and that it may simulate simple atrophy of the optic nerve. There is the peculiar and characteristic contractions of the visual field, so com mon in optic nerve atrophy, and if the disease attacks n anemic brunette it may, in the beginning, be impos ible to differentiate between incurable blindness and ransitory amblyopia. Fortunately, however, neither ysteria nor atrophy of the retina appear without other evidences of trouble in the nervous system. (There are some exceptions to this, however). In atrophy there is in the majority of cases some nuclear or spinal disease, or there is a history of trauma or chronic poisoning. A careful study of the visual field is often necessary to determine the hysterical nature of the visual disturbances. As in hysterical anesthesia there is no tendency to found the anesthetized areas within the distribution of certain sensitive nerves, and therefore not corresponding to known anatomical boundaries. So, whilst in atrophy we have the gradual narrowing of the visual field both for white light and colors in regular order, in hysteria the field of vision may be contracted, but its contraction for the fundamental colors is always irregu lar. It may be affirmed that red is the hysterical color. The hysteric notices it above all other colors, a fact which aids us greatly in determining the nature of some obscure nervous disturbances; this is especially so in reference to the visual field. In a healthy eye the usual field for objects and white light is larger than that for colors, and the field for the three fundamental colors, blue, red and green differs in size according to the color. Thus a blue object is seen further to the side than a red object, a red can be distinguished further to the side than a green, provided the individual is not color blind. If a disgram of the visual fields be drawn upon a piece of paper, it will be seen that the green ring is within red, the red within the blue, and all within the white, atrophy of the optic nerve leading to blindness begins by a contraction of the field for all colors, is regular, the color rings bearing the same relation to each other as we find in health. In hysterical amblyopia, however, the visual fields, although contracted, do not follow the regular order; the field for red will be larger than that for blue and the color rings may cross each other, this condition is peculiar to hysteria and hysteria alone, consequently in determining the hysterical nature of certain railroad injuries, a color chart of the visual field is necessary for I believe this peculiar color irregularity to be better evidence of hysteria than the supra orbital pain, the sub mammary tenderness, the sub capsular hyperesthesia, or the loss of the pharyngeal reflex, all of which are peculiar to that disease.

Within the memory of the majority of the members of this Society a new specialty in medicine has been formed. I refer to railroad neurosis, some who are adepts in medicine, surgery, or ophthalmology are specialists in this branch also, many are enthusiastic followers of Mr. Ericson, whilst equally as many don't believe one word of his teaching. I must admit that I am somewhat skeptical, especially since I know the close relationship between railroad neuroses, concussion of the spine are simple, common, every-day lying and hysteria It has been my fortune to have examined the vision of some who believed themselves the victims of railroad accidents and street car collisions, and I have observed how frequently they complain of pain in the eyes, dimness of vision, lost hearing, etc. I have seen spasm of the lids, partial spasmodic ptosis, double vis ion, and that rare symptom, monocular diplopia. In all such cases the contracted visual field was noted, usually combined with pronounced retinal hoperesthesia, often they complain that the light hurts the eyes, that reading, sewing, ond other close work is painful, perhaps impossible. That these symptoms can immediately or remotely follow severe blows on the head or back, being symptomatic of pathological changes in the brain or cord, or their membanes I am not prepared to deny, but I know that very often they are hysterical and many times the effect of auto suggestion. This photophobia is sometimes so severe as to incapacitate the the sufferer for all work or enjoyment, and if not relieved may lead to disastrous consequences for the unfortunate corporation who is supposed to be responsible through its agents. I do not know of any such severe symptoms being exposed to a jury but I am aware that

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such could be possible. An interesting case of this sort I saw some time ago. The patient was sent to me by Dr. King. He was a large, heavy, robust man about twenty years old, perhaps it would be better to say an overgrown boy. This individual and his friends claimed that he had not been able to open his eyes for nine months, consequently they considered him blind. Evi dently the photophobia was unusually severe. It was in the summer time when he visited me, yet he had on an ulster with the collar turned up, a towel wrapped about his eye which was covered by a black silk handkerchief, and it by a shawl, and over all was turned down a felt hat. After repeated trials, which were delayed by attacks of sneezing and facial spasm, the wraps were removed and the eyelids exposed. They were not swollen nor were they inflamed, but they were violently contracted. When, by forcibly separating the lids it was seen that the ocular conjunctiva was not red, the diagnosis, hysteria, suggested itself, and command to open the eyes and see was instantly obeyed. I must say that it had somewhat surprised myself, but the astonishment of the spectators can be imagined. There was absolutely nothing the matter with the man and yet he had been a burden to himself and friends for months. Such cases, put in a modified form, are not rare in any oculists practice, they are always anoying and often undiscovered. Hysterical anesthesia of the conjunctiva and cornea is common among the French, at least their authors report so, a nation of people particularly susceptible to neurotic disorders. In this country it must be very rare for I have never seen a case, but should I observe that symptom I would expect to find it in conjunction with anesthesia of the pharynx.

One would think that the otologist had grievances enough without the addition of hysterical complications of ear diseases, although such disturbances of hearing are recorded, still they are not very common, but they may arise in any case and simulate alarming conditions, as in the case reported in the beginning of this paper. It has been my fortune to have seen several examples of hysterical disease of the ear in which the diagnosis has been confirmed by the results. A very remarkable case was that of a man thirty-five years old sent to me by Dr. Lanphear. That individual, without any appar ent cause whatever, became suddenly and absolutely deaf. He was a healthy looking man, had never had syphilis, and could not account for his loss of hearing

There was no perceptible disease of the drum or in the tympanic cavity. Nor did he complain of any of the subjective symptoms of disease of the internal ears. A tuning-fork placed on the head was not heard, at least he said so. Taking into consideration the suddenness of the attack, that both ears were involved together with a complete negative history, the diagnosis hysteria has made and confirmed, the hearing suddenly returning in a few days.

I have seen several cases of what appeared to me to be hysterioal otalgia. It was always in young girls. The symptoms are violent pains in the ear, usually intermittent, and coming on towards evening, to all appearances there is no cause for this pain, the ears were not inflamed, the hearing good and the nose and throat healthy. Earache from defective teeth is not uncommon and neuralgia of the tympanic plexus is sometimes caused by malaria and perhaps rheumatism, but in the cases I have studied such causes could be eliminated. I have always insisted on the hysterical nature of that trouble and have found that the treatment together with the results have strengthened that opinion.

When such an organ as the eye or the ear becomes attacked by some neurotic disease, especially when the trouble involves the nerves of special sense, there is great danger that the function of the organ will be destroyed and consequently the responsibilities imposed on us are simply enormous. So in all cases unless the evidences of disease are too well marked to permit a mistake, the possibility of hysteria may be considered, but in this there is danger also, and I don't believe such a diagnosis is justified until an examination of all the important organs is completed, especially the kidneys and brain. In healthy eyes, amblyopia is in the majority of instances of cerebral origin; the probabilities are that hysteria is not the cause, and unless by chance the evidences are too apparent to allow a doubt the disease can only be discovered by a careful study of the visual field, especially for the fundamental colors, and a certainty that all refractive errors are corrected.

The Surgeon's Enemies.—The surgeon's enemies are almost always sporeless bacilli, and though some of these show great resistance to the action of antiseptics, such as the staphylococcus pyogenes aureus, the common cause of suppuration, it has nevertheless been shown that carbolic acid destroys these organisms more rapidly than corrosive sublimate.

Salt as a Sweetener of Sugar.—Sugar and salt are sometimes held to be incompatible or antagonistic in their action on the organs of taste, but it is a common social experience that the addition of the slightest dash of salt adds flavor to sweet coffee, and sugar-cured hams have their own reputation, while meat and vegetables cooked "sour and sweet" are a favorite delicacy in Germany (*Brit. Med. Jour.*). Professor Zuntz, at the Physiological Society of Berlin, definitely explained the making of sugar sweater by the addition of salt. From his experiments, he finds that if to a solution of sugar there be added a slight amount of salt and water, so weak that it excites no saline taste, the result is entra sweetening of the sugared water. The weakest of quinine solution is said also to produce similar results. The explanation given of the above seeming incongruity is that the ever so feeble saltiness or bitterness imparts an increased sensibility to the sensation of taste by the simultaneous stimuli, and hence an appreciation of additional sweetness.

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EDITORIALS

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Probability of the Establishment of a National Sanitary Department.

In consequence of the rapid advances made in the science of hygiene within the last two decades, medical writers of the United States and other civilized nations have been urging the necessity of the establishment of a National Department of Sanitation.

Senator Sherman, of Ohio, has this year introduced a bill for the establishment of such an institution and it was the project of a commission formed by thirty members of the American Medical Association. "Tne foundation of such a department," says Senator Sherman, "would be a declaration by Congress that the improvement of the public health is a supreme law, and that in the future progress of civilization, medicine will hold the rank it is entitled to amongst the State departments."

The practical results so far obtained by prompt hygienic measures to prevent the spread of epidemics as well as the advances made in the allied sciences all point to the advisability of founding such a department, which would form the head or directing center of all the State boards, and the results that could probably be ob tained thereby would certainly be far-reaching and would consribute in no small degree to the perfection of civilization.

All the laws and energies of the universe seem to tend toward that one end, the final acquisition for the human race of the most practical, useful and beautiful. Individuals may have to make sacrifices and even suffer during certain periods for the inevitable tendency of the energies toward the accomplishment of this end, the perfection and happiness of the human family.

Among those that have pre-eminently toiled in order to bring about this ideal end, we find at the present time the physicians in the front ranks and it is, as far as their work is concerned, above all preventive medicine of which we may expect the most in the future.

Dr. Manuel Septien, in the *Dietetic and Hygienic Gazette*, says: "A sanitary department would be the representative of the medical conscience of the nation; it would enlighten the people in all that relates to salubrity; as the head it would unite and profit by the labors of the State Sanitary Board, thus forming the center or focus from whence the powerful action of the Government would spread its benefits throughout the land."

However, while we may look forward to great improvements in sanitary measures, keeping away epidemics which in former years have decimated nations, it will be impossible to say if not the appearance of new diseases, more or less due to the effects of modern civilization, will do what former epidemics have done, namely, remove from this world those individuals whose tissues are weakened to such an extent as not to be immune toward disease germs or, if the latter have taken a foothold to readily overcome an attack of disease. In other words, may not in the future germs that at present are not known to cause disease, become pathogenic under surroundings, changed by an intensified civilization and culture? Clinical observations aided by those made in the biological laboratory, certainly are such that we must be forcibly reminded of this eventuality, and come to the logical conclusion, that even after we have succeeded in preventing epidemics of disease by sanitary measures, we must still bear in mind that the proper nourishment of the tissues in consequence of a well regulated, prudent and temperate life, mental, physical and moral purity will furnish the only certain safeguard against attacks of disease and their consequences, which, sooner or later, must have an effect upon the happiness and prosperity of the present race as well as future ones.

Puerperal Infection.

Mark A. Rodgers, in a paper entitled "Puerperium," writes the following in the *American Gynecological Journal*: By far the most important object to be kept in view during the puerperium, is the avoidance of septic infection. I shall not open for discussion anything pertaining to the treatment of puerperal fever, but shall confine my remarks simply to its etiology and prophylaxis. Most modern authorities speak of puerperal fever as any elevation of temperature during the puerperium. They then divide the cases into two classes:

1. Infectious puerperal fever.
2. Non-infectious puerperal fever.

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We shall only discuss the infectious fevers. These may be again subdivided into:

1. Those cases where the poison enters the system through wounds in the genital tract.

2. Those cases in which the poison enters through other channels.

The primary infecting agent may be either a ptomaine or a microbe, and infection almost always takes place by their entrance through wounds in the genital canal. Normally, many varieties of micro-organisms exist in the vagina. None of these, under ordinary circumstances, are pathogenic; but as a result of decomposition, certain conditions are developed which give them new activity, and they thus often become pyogenic. Other organisms also exist naturally in the various tissues which surround the pelvic organs, which have the same properties. Such an organism is the bacillus coli communis, which exists normally in the colon and is non-pathogenic, but is often the principal morbific microbe in appendicitis, salpingitis and general suppurative peritonitis. It is easy, therefore, to imagine how auto-infection may occur, even when the strictest aseptic precautions have been taken. It may arise from meteorism; from a collection of feces in the large intestine, ptomaines may be absorbed which will so impair the normal resistance of the tissues that microbic invasion will follow.

The present status of bacteriology, with regard to puerperal infection, seems to be nearing a fixed standard. It seems to have been proven that although some forms of micro organisms are excessively virulent, as for example those of diphtheria, erysipelas, bacillus of malignant edema, etc., yet with the development of certain conditions, many micro-organisms which ordinarily possess little or no virulence, may become deadly. As examples of such organisms, we may mention bacillus of acne contagiosa, bacillus coli communis, bacillus typhosus, etc. In the latter class of cases, the normal resistance is usually at fault, and this is often, in turn, brought about by the absorption of ptomaines.

To avoid puerperal infection, therefore, two conditions must be maintained:

1. The patient must be kept in such state that the normal resisting powers of the tissues will be unimpaired.

2. Perfect asepsis must be maintained, in order to exclude exotic micro-organisms.

The importance of the first condition, has been overshadowed by the attention which the bacteriological side of the question has attracted. As late as 1889, in the American System of Obstetrics, the writer on puerperal infection states positively that all micro organisms are introduced from without, and that no pyogenic micro-organisms have their habitat in the tissues of a healthy animal ("American System of Obstetrics," Vol. II, p. 408). In this same year, however, Tavel published his observations on the bacillis coli communis (Reprint of a paper read at the meeting of the Second Congress of Physicians and Surgeons, in Washington, D. C., September 22, 1891, by William H. Welch, M.D.).

Kuemmell had demonstrated in 1885 that bacteria were present in muscle and other subcutaneous tissues, which were taken from patients during surgical operations; and in 1891 Welch discovered that the skin was the natural habitat of a pyogenic microbe, which he called the staphylococcus epidermidis albus. When we reflect on the fact that these organisms have been discovered, and are known to be capable of producing fatal suppurative processes, it is not unreasonable to suppose that many more exist, of which as yet, we know nothing, and which on the development of conditions favorable for their growth, are capable of bringing about like results. The resisting powers of the tissues must then be maintained. As stated before, this function is often impaired by the absorption of ptomaines. Ptomaines arise principally from two sources:

1. From retained feces, and

2. From the decomposition of retained secundines.

To avoid the first source, the physician need only to see that the bowels are kept soluble. It is a growing opinion that the intestinal tract should be thoroughly cleaned out soon after labor. If this is done, say again the second day, one is much less apt to encounter milk-fever, and even the so-called physiological limit of 100 4° need not be seen. In addition to removing a source of ptomaine formation, a free movement at this time aids in the elimination of effete material, and depletes both the organs of gestation and the engorged breasts. I think salines are preferable for this purpose, as they produce copious watery stools. I am in the habit of employing the chemically pure sulphate of soda, which is probably the most bland of all the salines, and is not quite so unpleasant to take as many of the other salts.

As to retained secundines, of course they should be avoided as far as possible, by securing firm contraction of the uterus after delivery. Their presence, associated with a fetid odor, is always a danger signal. The uterus should be at once irrigated with a potent germicidal solution, combined with curettement if necessary.

As to the maintainance of asepsis, this is probably best obtained by:

1. Avoiding all examinations per vaginam during and after labor.

2. By the thorough repair of all lacerations.

3. By the application of the occlusive daessing.

The method or examination by abdominal palpation and auscultation, has been so well developed that one can almost invariably obtain all necessary information by these means. About the eighth month the presentation should be determined, and a vaginal examination should also be made at this time. If everything is found normal, no further examinations per vaginam are, as a rule, necessary.

In the repair of lacerations, particular attention should be paid to those of the posterior wall of the vagina. Catgut is perhaps the best suture material for this purpose.

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Microbes and Light.

A series of experiments has recently been conducted by Professor Marshall Ward, in relation to the effects of light on the bacillus of anthrax (*Medical Record*). A report on this subject has been published in *Nature*, and has given rise to some explanatory comments in a recent issue of the *British Medical Journal*. We are informed that Professor Marshall Ward's experiments appear to have been carried out with considerable care, and with a certain number of control experiments. His method of procedure was to inseminate gelatine or agar-agar with spores of bacillus anthracis, to pour the fluid medium into Petri's dishes and allow it to set to form a plate, then to fix a stencil-plate on the under surface of the dish and cover the whole (with the exception of the letter in the stencil-plate) with black paper; he then exposed the plate either directly or by means of a reflecting mirror to the action of December sunlight, so that the light could only act on the gelatine or agar agar exposed through the stencil letter. Two of his plates, kept for eighteen hours in a drawer and then exposed for five hours, had colonies developed all over the surface, except on that part which had been exposed to the light through the letter, where the medium remained perfectly clear, giving sharply-marked letters in both cases. In this case, Professor Marshall Ward thinks, the spores were acted upon just at the time they were germinating and therefore during their most tender period; so that they were killed off very perfectly and rapidly. In other cases the line of demarcation was not so distinctly seen, the margins of the letter and the spores there sown receiving reflected rays from the glass cover of the plate. The general result of his experiments was that the actinic rays of light, quite apart from the heat rays, act as germicidal agents.

A satisfactory demonstration of Ward's methods and results was made before the Fellows of the Royal Society, and should go far to establish the accuracy of his claims. Our British contemporary states that Marshall Ward's general results agree with those obtained by Downes and Blunt, and by Tyndall, the latter of whom, although he failed to prove that germs were destroyed by sunlight, was nevertheless able to show that their vitality was very markedly interfered with. In France, where this question has had considerable attention paid to it by Arloing, Nocard, Duclaux, Straus, Roux, and others, it has been proved most conclusively that light has a direct germicidal action, not only in the case of the anthrax bacillus, but also in that of various other species of micrococci and bacilli; and some years ago it was pointed out that light might be made to play a very important part in the attenuation of the virulence of anthrax vaccine. It has, however, been insisted on by some observers that the action of light is not altogether a direct one, but that light acts indirectly by altering the medium in which the organism is growing; and quite recently Duclaux has again returned to the attack on these lines, he holding that under the action of light there are developed in almost all the nutrient media with which we are in the habit of working, certain substances which even when present in very small quantities, exert a very powerful germicidal influence.

The recent observations made by Koch on the action of direct sunlight in killing the tubercle bacillus, even in the space of a few minutes and regularly in two or three hours, Roux and Yersin's experiments on the action of light on the diphtheria bacillus, Buchner's, Janowski's, and Geisler's experiments on the typhoid fever bacillus, are all of very great interest, the two latter observers finding that the parts of the solar spectrum and the spectrum of diffused sunlight were far more active in preventing the growth of organisms, and determining their death, at the violet than at the red end, while Geisler has found that similar results might be obtained even when the electric light is used, especially with the violet rays of its spectrum. Of course, the more delicate experiments were done, as Tyndall's earlier experiments were, by noting the restraining action of light on the development of the various microbes used, rather than by determining the actual death of the organism. Another very important point recently demonstrated, but one often hinted at and even noted before, is that observed by Momont, who found that dry anthrax spores might be exposed with impunity to the action of light for a very considerable time, while moist spores exposed to sunlight for forty eight hours in the presence of oxygen were so devitalized that they could not grow at all. Bacilli without spores, under similar conditions, were deprived of their vegetative activity by exposure to sunlight in from one to two hours, or even less, but in the absence of oxygen very long exposure—forty to fifty honrs—was not sufficient to prevent them germinating when introduced into a suitable medium.

It is certainly a comforting reflection that the healthful effects of sunshine and sunlight are thus rationally explained, and can be scientifically demonstrated. This is only another instance where apparently abstruse science touches the eminently practical domain of everyday life. Sunshine, it would seem, may be relied upon where fumigation by sulphur would be too costly, cumbersome, and perhaps too ineffectual. One thing is certain, even if the sun cannot be utilized as a universal microbicide, sanitary authorities should be specially watchful of pestilences breeding in those neglected "dark corners," which unfortunately abound in all the large cities of the world. If we could have sunlight on tap, artificial germicides migth be consigned to the lumber-room of things that have outlived their usefulness.

Editorial Change.—Dr. J. C. Culbertson for the past two years editor of the "Journal of the American Medical Association" has returned to Cincinnati and resumed editorial management of the "Lancet and Clinic." Dr. John B. Hamilton has taken charge of the editorial department of the "Journal."

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ABSTRACTS

Pleuritic Eclampsia.—A rare, interesting, and instructive case has recently been reported by M. Ch. Talamon, the accomplished editor-in chief of our valued exchange, *La Medicine Moderne* (*Medical Bulletin*). A few cases have been heretofore observed in which convulsive seizures had taken place during the course of a pleurisy. In all the former instances suppuration was present and the spasms were consecutive to irrigation of the pleural cavity. It was, therefore, plausibly supposed that the eclampsia was of reflex origin, due to irritation of the serous membrane. Dr. Talamon justly points out, however, that numberless injections have been made into the sac without producing convulsions, and that, moreover, this result never followed the first operation, but occurred after the pleura had been accustomed to contact with a fluid introduced from without. In the case which formed the subject of his paper there had been no suppuration, and the epileptic attack was produced spontaneously, without any artificial irritation of the pleura.

The patient was a laborer, fifty years of age, who entered the Hospital Tenon on December 16, after having suffered for four days from pain in the right side. He had been attacked suddenly with pain and chills; he had endeavored, nevertheless, to go about his work, but had finally been compelled to seek the hospital. Upon his entrance there was found dullness in the lower two-thirds of the right side of the chest, together with a slight diminution of the local vibrations. There was a superficial murmur and egophony in the axilla and behind, extending to the angle of the scapula. At the base there were fine subcrepitant rales. The urine contained no albumen. The temperature was 102°. There was some cough, with tough viscid, rusty sputum like that of pneumonia. Tome subcrepitant rales were also detected at the left base. The pain, the temperature and signs persisted during the days following admission, and the diagnosis was made of pneumonia, accompanied by a secondary pleurisy. Six days after coming into the hospital the expectoration became mucopurulent, the signs remained the same, and the fever endured. An exploratory puncture brought away a yellowish serous fluid. On the 2nd of January there was some improvement in the signs, but no reduction of temperature. On the 7th aspiration was performed, and one and three-fourths pints of limpid, yellowish serum withdrawn. Three days later, about 7 o'clock in the morning, after a quiet night, the patient was suddenly attacked by a convulsion, with loss of consciousness. The unconsciousness continued when he was seen by the reporter, at 10 a.m. The crisis had begun with loss of consciousness. This was followed by a general rigidity of the body, tonic and clonic spasms, and frothing at the mouth. Later, opisthotonos occurred, the face was pale, the lips livid, the eyes wide open, the pupils contracted. Unconsciousness persisted until 5 o'clock in the afternoon. The convulsions had yielded at 2 o'clock.

On the following day the patient had no recollection of what had passed; he had a bewildered expression, and replied at random. Four days after the seizure there was still hebetude, with incontinence of feces and urine; there was no albuminuria. The fever persisted. In this condition the patient remained until the 31st of January, when, in the afternoon, he experienced an attack similar to the first. From the second seilure there was no reaction, and death took place at the end of six hours.

The autopsy showed the presence of a right-sided pleurisy, with scanty effusion, and very thick false membranes attaching the pleura to the lung. There was atelectasis of the lower lobe of the lung and congestion of the upper. There was no trace of recent tuberculosis, but an old caseous focus was found at the summit. On the left side there was some pulmonary consolidation with some soft and recent false membranes, and a few spoonfuls of serum in the pleural cavity. To naked-eye observation the brain and its membranes were perfectly normal.

The eclamptic attacks in this case were of precisely the same charactes as in the cases heretofore described, and which depended upon irrigation of the pleural cavity. The former cases had, however, been of shorter duration, and the stupor had disappeared at the end of some hours. In none were lesions of the brain detected or any other condition, except that of the pleura, capable of explaining the occurrence of convulsions. These in the case reported by Dr. Talamon, could not be of reflex origin, since they occurred spontaneously three days after a simple puncture made with a hypodermic syringe, and attended by no inconvenience. Reflex manifestations are usually preceded by local accidents, but, in the case under consideration, there was first a loss of consciousness, followed by convulsions and generalized contractures, together with a coma which, in in gravity and duration, exceeded that of simple reflex irritation. The manifestations bore far more resemblence to a toxic eclampsia analogous to puerperal, saturnine, or uremic eclampsia. It is, therefore, reasonable to suppose, writes the author, that the phenomena were due to the sudden entrance into the blood of a toxic substance which acts upon the brain and probably the bulb as a convulsive poison. In this particular case the poison would be the toxin of pneumonia. The pleurisy depended upon a pneumonic origin. The abrupt commencement, the elevation of temperature, the rusty sputum of the first days, the abundant fibrinous exudation in the pleura, and the posterior development of a lobar pneumonia in the opposite lung, all indicate that the pleural inflammation was due to the action of the pneumococcus. For the production of convulsions we must suppose one of two conditions—either a special susceptibility of the subject or the sudden entrance into the circulation of an abnormal quantity of poison. The former could not be attributed to the patient of

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Dr. Talamon. It is necessary, therefore, to adopt the latter supposition. It will be remarked that the first convulsion followed a puncture of evacuation and a consequent absorption of a large part of the effusion. Is it not possible that this absorption introduced into the blood a sufficient quantity of pneumotoxin to irritate the central nervous system? The second, and fatal attack, may be explained by the formation of a fresh pneumonic focus in the opposite lung The toxins produced in this new situation and thrown into the blood exerted their influence upon a brain still under the impression of the first attack, and were sufficient to reawaken that morbid impression, the effects of which had not yet entirely disappeared.

Therapeutics in the Summer Disturbances of Children.—The careful observing physician can but be possessed of the facts which have been established by the delvers in the laboratory regarding the various bacteria being a primary and an aggravating cause of many of the summer diarrheas of children. Many times when the intestinal irritations are pronounced; when the evacuations give evidence of fermentation; when the frequent unsatisfactory passages, accompanied by marked tenesmus and straining efforts on the part of the child, pointing strongly in the direction of dysentery; the administration of the one-hundredth to the fiftieth of a grain of corrosive sublimate to a tablespoonful of sweetened peppermint water, every two to four hours will be followed by almost magical results. Undoubtedly the remedy acts as a germicide, an antacid, as a stimulator of the biliary secretion and as such will serve as well. I have found in many conditions the following formula admirable:

℞ Katharmon,
Glycerine pepsine, - - aa ℥ss.
Cordial, - - - - - ℥iij.
M.
Sig. A teaspoonful every two to three hours.

If there be any pain present, and it be desirable to prevent excessive peristalsis, a few drops of paregoric added to each teaspoonful will be well. The profession is no doubt familiar with the component parts of Katharmon, it containing acid salicylous from oil of wintergreen and boracic acid, but the most important of all, the dist. extract of witch hazel, in this latter remedy witch hazel, we have a more valuable astringent and anti hemorrhagic agent than we generally realize. It is most soothing to any irritated surface. It is one of the best local remedies to relieve the tendency to bleeding which we have, and we can readily understand that for this reason if for no other, Katharmon would often be indicated in dysentery or the old-fashioned bloody flux.

NOW is the time to subscribe for the MEDICAL REVIEW.

CORRESPONDENCE

Washington Letter.

Editor MEDICAL REVIEW.—The interest of the medical profession of the whole country, and indeed of this whole continent, is beginning to be focussed upon Washington, "The City of Magnificent Distances". This is chiefly because the Pan-American Medical Congress of the journals and professional gossip is already beginning to materialize itself.

The various committees and sub-committees have been doing excellent work, so much that the Congress is almost a fact at the present writing. The Committee on Arrangements, through the Committee on Halls and Exhibits, is even now ready to make the various assignments to the different Sections. These are as follows:

The Committee on Registration, under Dr. C. H. A. Kleinschmidt, will occupy Willard's Hall, corner of Fourteenth and F Streets, N. W., adjacent to the rear of Willard's Hotel.

The sessions of the Section on General Medicine will be held in Albaugh's Grand Opera House, at the corner of Fifteenth and E Streets, N. W.

The Section on General Surgery will occupy a hall in the Columbian University, at the corner of Fifteenth and H Streets, N. W.

The Section on Military Medicine and Surgery will occupy the large Lecture Hall of the U. S. National Museum, at Ninth and B Streets, S. W.

The Section on Obstetrics has been assigned to a parlor, or parlors in the Ebbitt House, at the corner of Fourteenth and F Streets, N. W.

The Section on Gynecology and Abdominal Surgery will occupy a hall in the Law Department of the National University, on Thirteenth Street between F and G Streets, N. W.

The Section on Therapeutics has been quartered in the hall of the Medical Department of the Columbian University.

The sessions of the Section on Anatomy will be held in a hall of the Columbian University, at the corner of Fifteenth and H Streets, N. W.

The Section on Physiology will hold forth in a hall of the Medical Department of the Columbian University, on H Street between Thirteenth and Fourteenth Streets, N. W.

The Section on Diseases of Children will hold its sessions in one of the parlors of Arlington Hotel, at the corner of Vermont Avenue and H Streets, N. W.—it is in sight of the White House, the Blaine Mansion where the late ex-Premier died, the Cosmos Club of scientific men of the city and many other interesting points. The Sections on Opthalmology, Otology, Laryngology and Rhinology will also be quartered in this hotel.

The sessions of the Section on Pathology will

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be held in the building of the Medical Department of the Georgetown University, on H Street between Ninth and Tenth Streets, N. W.

The Section on Dermatology and Syphilography will be quartered in the parlors of the Riggs House, at the corner of Fifteenth and G sts., N. W.

The Section on Hygiene, Climatology and Demography will hold its sessions in the parlor or parlors of Willard's Hotel, at the corner of Fourteenth Street and Pennsylvania Avenue, N. W. The Section on Marine Hygiene and Quarantine will also be located here.

The Section on Orthopedic Surgery will hold forth in the parlors of La Normandie, at the corner of Fifteenth and I Streets, N. W.

The Section on Diseases of the Mind and Nervous System will be assigned to the Medical Department of the Georgetown University, on H Street between Ninth and Tenth Streets, N. W.

The Section on Oral and Dental Surgery will hold its sessions and transact its business in a hall of the Law Department of the National University, on Thirteenth Street between H and I Streets, N. W.

The Section on Medical Pedagogics has been assigned to the parlors of the Arno on Sixteenth Street between I and K Streets, N. W.

The sessions of the Section on Medical Jurisprudence will be held in the Ebbitt House, at the corner of Fourteenth and F Streets, N. W.

The Section on Railway Surgery will transact its business and hold its sessions at the Cochran, in the Banquet Hall, at the corner of Fourteenth and K Streets, N. W.

All of these hotels are up town hotels, are first-class and the most desirableas to location and other qualities in the District of Columbia.

At the annual meeting of the American Medical Association it is said that seven thousand dollars were cleared for the Association by means of holding an exhibition on drugs, books, instruments, etc. and charging a fee for floor-space, a bay-window being sold to one firm for two hundred and fifty dollars. The feasibility of holding such an exhibition in connection with the Pan-American Medical Congress is now being considered. If the Committee on Halls and Exhibits receives a sufficient number of favorable requests and responses from intending exhibitors it will provide a hall for such purpose. This will afford the exhibitors an unrivalled and economical opportunity of bringing their goods to the attention of the physicians of Canada, the United States, Mexico, the West Indies, Central America, South America and Hawaii, not only to the attention of the physicians of these countries but to their attention *directly and personally*, and moreover, at slight expense. There is no reason why American firms should not secure and maintain the trade of these countries if they really desire it.

If not more than 10,090 square feet of floor space are required, a hall on the ground floor of Albaugh's Opera House (where the general meetings will be held) will be provided. If more than that number of feet are required it will be necessary to procure a hall on the fifth floor of the Washington & Georgetown Cable Railroad Power-house, one block from the Opera House. This building is provided with four wide iron stairways, two large passenger elevators and two freight elevators, each capable of containing a street car.

At the present time the outlook for the holding of such an exhibition is exceedingly favorable, it now remains to see what the exhibitors think of the plan.

An Interesting Case.

Editor MEDICAL REVIEW.—I was called about 2 years ago to see G. G., age about 40 years and found him suffering from pain in the left shoulder and the pain extending down the left arm and after making an examination I came to the conclusion that it was of a rheumatic character and told him it was rheumatism. Dr. Little of Manhattan also saw the case and gave a similar opinion as to the diagnosis. We treated him for rheumatism and the pain subsided and the gentleman resumed his work again as usual; so I dismissed the case from my mind and had entirely forgotten him until about 6 months ago he came into my office walking with a cane and said he had that rheumatism again and that it was in his thigh this time.I made an examination and found a lump about the size of a quail's egg near the femoral artery and the pulsations were so strong about it that I diagnosed it as an aneurism but asked him if he had ever been shot that if he had I had found the ball. I urged him to let me operate on it but he refused and said he would prefer to be cured by medicine rather than run the risk of an operation near such a large blood vessel; so I put him on tonic treatment and gave him tr. iodine to apply two or three times daily. He improved and expressed himself as well and thought I was a fine doctor but about 3 weeks ago another lump appeared in the popliteal space of the left leg that gave him considerable trouble and caused a flexion of the limb and he was forced to use his cane again. I examined him and found a lump about as large as a walnut and very hard. I gave him some liniment and some medicine to be taken internally and told him to return in about a week and I would lance it. I also told him to poultice it at night, and a few days ago while his wife was rubbing it with the liniment something struck her hand and on examination she found the point of a darning needle, fully three inches long. She extracted it and he is getting along nicely. How easy we are deceived.

St. George, Kansas. J. W WILHOIT, M.D.,

American Pharmaceutical Association.—All physicians interested in the drug business should join the American Pharmaceutical Association. For information address Dr. H. M. Whelpley, St. Louis, Mo., chairman of the Committee on Membership.

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MEDICAL SOCIETIES

American Medical Association.—At the forty-fourth annual meeting held at Milwaukee, Wis., June 6, 7, 8 and 9, 1893, the Section on Obstetrics and Diseases of Women limited the number of papers to be read to forty, which had compelled the Chairman to reject some from very able men.

Some General References to Obstetrical and Gynecological Advancement,

was the subject of the address by the Chairman, Dr. John Milton Duff, of Pittsburg. He thought the Section should publish a volume of proceedings, more especially in order to put on permanent record the discussions. The specialist should be an evolution from the general practitioner. Too many of our recruits had not had sufficient experience to be taken into the ranks of the Section. Sufficient instruction was not given in obstetrics and diseases of women in teaching institutions. He believed it was no exaggeration to say that fifty per cent of graduates had never witnessed a labor nor introduced a speculum. We should demand of teaching institutions that they appoint professors for their broad ability to teach, and not because of their ability to purchase position. Many young men showed a willingness to do celiotomy who were unable to repair a vesico-vaginal fistula or determine the diameters of the pelvis. The general and special medical journals were steadily improving in quality; and Dr. Duff said he hesitated, through fear of showing his inferiority, to make any criticism in this direction. He had heard, however, an expression of opinion on the part of some that there ought to be more leading articles from the editors.

Hysterectomy, he thought, had been shown by statistics to be a justifiable procedure in cancer of the uterus. Fully ninety per cent of cases coming to the gynecologist were, however, inoperative; and this suggested the responsibility of early diagnosis by the general practitioner.

Referring to operations on the insane, Dr. Duff said it was absurd for editors or others to suggest that gynecologists seriously considered removing the appendages for all cases of insanity. But insanity was not a panacea for pain, and insane women should not be denied the benefit of surgery for disease which was given her well sisters. It should be regarded as a crime against society at the present time for those mentally unsound to propagate the species. The copulative act should be performed only in the best physical and mental condition of both father and mother.

The field opened up by the revival of pubectomy was alluded to. The rate of mortality from puerperal sepsis was now lower in institutions than in private practice—a suggestive lesson to general practitioners and obstetricians. Exploratory operations were not without danger, and should be undertaken with precaution.

The Causes of Diseases of Women.

Dr. Charles P. Noble, of Philadelphia, read a paper on this subject, treating of it in a systematic way, dividing the causes as follows:

1. Imperfect development of the sexual organs.
2. Gonorrhea.
3. Pelvic inflammation following childbirth.
4. Lacerations due to childbirth.
5. Miscellaneous causes—such as constipation, erroneous methods of living, bad dress.

Among the causes of imperfect development one could recognize forcing at school, want of bodily exercise, work in factories, etc. Absence of menstruation or scanty flow was seen in some corpulent women; but he was unable to say what was the relationship.

This class of patients were apt to show imperfect development of the general system, to have chorea, etc. Exercise in the open air, iron, arsenic, tonics, were indicated.

Dr. Howard A. Kelly, of Baltimore, had given this subject of preventive disease in women much thought, and believed a book could well be written upon it. In many instances the cause of imperfect development of the genitals and of the general system was to be traced back of the child to the poorly nourished and ill condition of the mother before and after conception. Gonorrhea in children was not an uncommon first cause of disease in women. Tuberculosis had been found as the cause in one out of five of his operative cases of pelvic inflammation.

Dr. E. P. Davis, of Philadelphia, thought neuralgias during the pregnant state, especially of the sciatic type, were often avoidable by early attention to constipation and general habit.

Dr. Joseph Price had found vaginitis in infancy not an uncommon cause. Gonorrhea was now a frequent source of pelvic inflammation, while it was unusual before the wide development of the railroad system. Referring to the favorable statistics of some lying-in institutions, regarding the mortality from puerperal sepsis, he said they did include the mortality from other causes. In an institution with which he was connected, not a child had been lost among 1,300 births.

Dr. Reed, of Ohio, had found the usual cause of one daughter only in a family of several failing to menstruate at the usual time to be due to imperfect development. The doctor erred in telling the mother it would be all right after marriage; for unless measures were taken for better development, the marriage would be sterile—the patient would suffer.

Dr. Carstens, of Detroit, did not believe gonorrhea so common a cause of pelvic inflammation. The more frequent cause was the vicious habit of women producing abortion with dirty darning-needles, etc.

Dr. Hoff, of Ohio, had practiced nearly half a century, and had not seen half a dozen cases of gonorrhea in

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daughters. Perhaps it was not so common as it had been represented in Philadelphia.

Dr. Hoffman, of Philadelphia, did not believe the vaginitis of children was often of gonorrheal type. He had often found tuberculosis in the pelvis, and believed it frequently followed pus collections, if it was not caused thereby.

Dr. Sell, of New York, had observed gonorrhea in children, and even in a minister's family from supposed moral country districts; he would not mention the State.

Dr. McMurtry, of Louisville, thought some doctors were yet guilty of causing much disease among women by using caustics to the cervix, etc.

Puerperal Hemorrhage.

Dr. James P. Kerb, of Pittsburg, read the paper. The importance assumed by puerperal hemorrhage among medical and surgical subjects was due to its frequency, and the fact that, unless it was met by speedy and efficient remedies, it would end fatally. Practitioners were too apt to consider all cases of labor as normal, and not to make any preparations for this accident. One should obtain all the information possible regarding whether there was a family history of bleeders, of individual menstrual peculiarity, hemorrhage at previous confinement, etc.

The author mentioned causes, which, naturally, were various, then related one personal experience, and passed to the general subject of treatment. His case was that of a woman, to whom he was called for the first time after the beginning of hemorrhage. She gave a good history, having had no trouble at previous confinements, but her feet were swollen and albuminuria was not improbable. Without warning, a sudden gush of blood took place, and when he arrived she was in collapse and died within an hour from the commencement of the hemorrhage. The treatment had been podalic version and delivery, general and uterine stimulants, and uterine manipulatians. The uterus did not contract in spite of the use of ergot, hot water, ice, vinegar, etc. The exact cause of the hemorrhage was not learned. Severe post partum hemorrhage was generally a preventable accident by skilful management of the third stage of labor. Attention should be given to securing contraction of the uterus by carefully following the organ down with the hand when the child was expelled. If the uterus were soft and flabby, give a preparation of ergot. Misrachi claimed that caffeine acted more readily than ergotine, especially if the patient had lost blood. If the patients were known to be bleeders, J. M. Duff gave strychnine, one sixtieth to one-third grain, three times daily for about two months before term. Bosi recommended hydrastis canadensis. Murray advocated plugging the vagina during hemorrhage if the os were undilated, but the author feared hemorrhage would go on within the womb. When the uterus was empty it might be packed.

Kocher, he said, recommended a method which was least novel; invert the uterus, put a rubber band around the neck, remove the band after six hours, and replace the organ. If the circular artery were injured, it should be ligated. Plugging of the vagina was good treatment in hemorrhage from the cervix, the seat of carcinoma. Transfusion was useful as a palliative.

Dr. Barker, of Philadelphia, had learned from an experience with one case that ice, hot water, and ergot were entirely inefficient in severe post-partum hemorrhage, and their use led to waste of precious time. He would recommend the tampon. In slight hemorrhage the measures first named would effect control. He thought the number of cases seen by one was in inverse ratio to his experience in midwifery. The youthful doctor was apt to be meddlesome through over-anxiety.

Dr. E. P. Davis said it was very difficult for a serious hemorrhage faom the uterus to continue while one kept one hand in the uterus and compressed from without with the other. In England they were again discussing compression of the abdominal aorta

Dr. Morehead, of Wisconsin, had saved a case, twenty years ago, by compressing the abdominal aorta with the hand in the uterus, re-enforced part of the time by the other hand pressing upon the uterus from without. Another case was seen by him later, and treated successfully in the same manner.

Dr. Montgomery, of Philadelphia, had found strychnia excellent in persons showing tendency to hemorhage, and also in a case of hemorrhage until shock had passed. He doubted the practical value of compression of the abdominal aorta, especially with the hand in the uterus, as part of the blood-supply came from the ovarian arteries, which arose higher on the aorta. The benefit experienced in Dr. Morehead's cases was probably due to the presence of the hand in the uterus, just as it was in other cases to gauze.

woman was able to be up and about, although a slight degree of separation of the pubic bones persisted.

The Relation of Age, Sex and Social Condition to the Mortality from Tuberculous Disease.—In an analysis of 1771 fatal cases of tuberculous disease in the Swedish-Finnish community of Helsingfors during the years from 1882 to 1889, Holsti (*Zeitschrift f. Klinische Medicin*) found that the mortality from this cause was incomparably greatest during the first two years of life, but declined thereafter, to reach its minimum between the years of five and fifteen; rising again, to reach its maximum between the years of thirty-one and forty, after which it again gradually declined. In general, the mortality from tuberculosis was greater among males than among females, except between the fifth and the twentieth year, during which period the greater number of deaths from tuberculosis occurred among females. After the maximum mortality had been reached, between the thirty first and the fortieth year, the mortality among females gradually grew less; in males, however, the mortality continued at almost an unchanged level until the age of sixty.

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NOTES AND ITEMS

Notice to Intending Contributors to the Proceedings of the Pan-American Medical Congress.—The Regulation of the Congress providing that abstracts of papers shall be in the hands of the Secretary General on or before July 10, was framed to give the Literary Bureau ample time in which to make the necessary translations, and publish the four editions of the book before the assembling of the Congress. The requests that abstracts be sent in even before the date indicated has been so generally complied with, and the work is so far advanced, that the Literary Bureau finds itself in position to accept abstracts during the remainder of July. To insure careful translation and publication, however, they should be sent in at the earliest possible date to Chas. A. L. Reed, Sec'y-General, 311 Elm Street, Cincinnatti.

It is suggested that abstracts be made as full as possible within the 600 word limit.

Army and Navy Medical School.—By direction of the Secretary of War, upon the recommendation of the Surgeon General of the Army, an Army Medical School will be established in the city of Washington for the purpose of instructing approved candidates for admission to the Medical Corps of the Army in their duties as medical officers.

The course of instruction will be for four months, and will be given annually at the Army Medical Museum, in Washington City, commencing on the 1st day of November.

Charles Alden, lately medical director of the Department of Dakota, in addition to his duties as deputy surgeon general, will act as president of the school. Lieut. Col. William H. Forwood, deputy surgeon general, now on duty at the District Soldiers' Home, will be professor of military surgery. Maj. John Billings, who is now in charge of the Army Medical Museum, will be professor of military hygiene, and Capt. Walter Reed, assistant surgeon, now on duty at St. Paul, will have charge of the microscopical work.

Surgeon General Tryon has taken another step toward the formation of his school for instruction for Naval Surgeons at New York by securing the detail of Passed Assistant Surgeon D. M. Guiteras to duty as assistant to the director in charge of the naval laboratory and also as instructor in the new school. Medical Director Bloodgood, now in charge of the laboratory will retire in August and will be succeeded by Medical Director Wells, at present attached to the Naval Hospital in the city (Washington D. C.). The corps of instructors in addition to Dr. Guiteras will include the Naval Surgeons who are members of the Examining board at New York.

The Diagnosis of Love.—Dr. James Finlayson, (*Boston Medical and Surg. Jour.*) in an historical review of Herophilus and Erasistratus, quotes a story from Plutarch concerning the latter, Antiochus, son of the King Seleucus, fell in love with his step mother the young and beautiful Stratonice. His condition was extremely unhappy. He made the greatest efforts to conquer his passion, but they were of no avail. At last he resolved, in his despair, to rid himself of life, by neglecting all care of his person and abstaining from food; for this purpose he made sickness his pretense. Erasistratus, easily discovered that his distemper was love; but it was difficult to conjecture who was the object. In order to find it out, he spent whole days in his chamber; and whenever any beautiful person of either sex entered it, he observed with great attention not only his looks, but every part and motion of the body which corresponds most with the passions of the soul. When others entered he was entirely unaffected, but when Stratonice came in, as she often did, either alone or with Seleucus, he showed all the symptoms described by sappho, the faltering voice, the burning blush, the tumultuous pulse, and at length, the passion overcoming his spirits, a *deliquium* and mortal paleness.

Erasistratus concluded from these tokens that the prince was in love with Stratonice, and perceived that he intended to carry the secret with him to the grave. He saw the difficulty of breaking the matter to Seleucus; yet depending upon the affection which the king had for his son, he ventured one day to tell him "that the young man's disorder was love, but love for which there was no remedy." The king, quite astonished, said, "How! love for which there was no remedy!" "It is certainly so," answered Erasistratus, "for he is in love with my wife." "What, Erasistratus!" said the

make any criticism in this direction. He had hearce however, an expression of opinion on the part of some that there ought to be more leading articles from the editors.

Hysterectomy, he thought, had been shown by statistics to be a justifiable procedure in cancer of the uterus. Fully ninety per cent of cases coming to the gynecologist were, however, inoperative; and this suggested the responsibility of early diagnosis by the general practitioner.

Referring to operations on the insane, Dr. Duff said it was absurd for editors or others to suggest that gynecologists seriously considered removing the appendages for all cases of insanity. But insanity was not a panacea for pain, and insane women should not be denied the benefit of surgery for disease which was given her well sisters. It should be regarded as a crime against society at the present time for those mentally unsound to propagate the species. The copulative act should be performed only in the best physical and mental condition of both father and mother.

The field opened up by the revival of pubectomy was alluded to. The rate of mortality from puerperal sepsis was now lower in institutions than in private practice—a suggestive lesson to general practitioners and obstetri-

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king, "would you, who are my friend, refuse to give up your wife to my son when you see us in danger of losing our only hope?" "Nay, would you do such a thing," answered the physician, "though you are his father, if he was in love with Stratonice" "O my friend," replied Seleucus, "how happy should I be if either God or man could remove his affections thither! I would give up my kingdom, so I could but keep Antiochus." He pronounced these words with so much emotion, and such a profusion of tears, that Erasistratus took him by the hand and said: "Then there is no need of Erasistratus. You, sir, who are a father, a husband, and a king, will be the best physician too for your family." Upon this Seleucus summoned the people to meet in full assembly, and told them it was his will and pleasure that Antiochus should intermarry with Stratonice, and that they should be declared King and Queen of the Upper Provinces.

For the cure of the young prince Erasistratus is reported by Pliny to have received a fee of 100 talents which is calculated as amounting to more than one hundred thousand dollars.

The Toxin of Tetanus.—Courmont and Doyen (*Province Medicale*), as the result of a study of pathogeny of tetanus, arrive at the conclusion that the bacillus of Nicolaier gives rise to the symptoms of tetanus through the intermediation of a suluble ferment which it generates. This ferment, which is not toxic *per se*, elaborates within the organism a substance of tetanizing properties, comparable in its effects to strychnine. This secondary substance may be found in the tetanized muscles, in the blood, and sometimes in the urine. It resists prolonged boiling, while the products of the tetanus bacillus are rendered innocuous by exposure to a temperature of 149°. Certain conditions of temperature seem essential to his reaction. This will explain the immunity of frogs to tetanus in winter-time. Immunity, natural or acquired, artificial immunization, may be considered the result of influences that prevent, retard, or arrest this process of fermentation. It is probable that other products of microbic activity, said to be toxic, act equally as ferments, producing toxic matters within the organism. It may be that the paralysis and other late accidents of diphtheria can be explained in a similar manner.

Cornet-Player's Cramp.—Turner (*Lancet*) has reported the case of a man, twenty-nine years old, who had played the cornet as a means of livelihood from the age of nine years. For two years he had observed that he was unable to sound certain notes, from an inability to direct the tongue for that purpose. These movements could, however, be performed readily and easily when the man was in his own room, practising, or when allowed his own time, but not when suddenly called upon to do so. After playing for some time, the condition seemed to improve rather than become worse. In all other actions, both in playing the cornet and otherwise, the movements of the tongue were uninterfered with. At no time was any pain felt. The tongue was large, atonic, and somewhat indented by the teeth, but this condition improved under treatment with strychnine and dilute hydrochloric acid. Toward the tip a few fibrillary contractions could be seen. The electric re actions were normal. There was no affection of the lips or soft palate, and the linguals and labials were well formed. The knee-jerks were equal and of normal force. There was no family history of neuroses. It was not known that other cornetists suffered similarly.

Spontaneous Rupture of the Symphisis Pubis During Labor.—Oelschlager (*Centralbl. f. Gynakol.*,) has reported the case of a primipara, twenty years old, in which with the onset of labor-pains two eclamptic attacks occurred in quick succession. The lower extremities were edematous, and the urine contained a small amount of albumin. The promontory of the sacrum could be touched with two fingers introduced into the vagina. The head was quite high in the pelvis and but slowly followed in the grasp of the forceps, a not excessive degree of traction being exercised. As the head began to rotate in the small pelvis a crack was distinctly heard. Examination disclosed a separation of 1.15 inches in the situation of the symphysis pubis, and the delivery of a living child weighing nine pounds was soon readily effected. On the day following the labor a leather support was applied to the hips. For two weeks the region of the symphysis was tender upon touch and painful upon movement, but a week later the woman was able to be up and about, although a slight degree of separation of the pubic bones persisted.

The Relation of Age, Sex and Social Condition to the Mortality from Tuberculous Disease.—In an analysis of 1771 fatal cases of tuberculous disease in the Swedish-Finnish community of Helsingfors during the years from 1882 to 1889, Holsti (*Zeitschrift f. Klinische Medicin*) found that the mortality from this cause was incomparably greatest during the first two years of life, but declined thereafter, to reach its minimum between the years of five and fifteen; rising again, to reach its maximum between the years of thirty-one and forty, after which it again gradually declined. In general, the mortality from tuberculosis was greater among males than among females, except between the fifth and the twentieth year, during which period the greater number of deaths from tuberculosis occurred among females. After the maximum mortality had been reached, between the thirty first and the fortieth year, the mortality among females gradually grew less; in males, however, the mortality continued at almost an unchanged level until the age of sixty.

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RAILROAD NEWS

Special Railroad Rates for the First Pan-American Medical Congress to be held at Washington, D. C, September 5th to 8th Inclusive.—The Chesapeake & Ohio Railway, from Cincinnati or Louisville to Washington, D. C., is the quickest, most picturesque, interesting and comfortable line between those cities. Their trains are vestibuled throughout, lighted by electricity and carry the latest pattern of through first class coaches, Dining Cars and Sleepers.

The scenery along the upper Ohio and Kanawha Rivers, through the gorgeous and canons of the New River, among the Peaks and Valleys of the Blue Ridge and Alleghaney Ranges and over the fertile plains and historic battle fields of Virginia constitutes a kaledioscopic panorama that for variety, beauty, grandeur and historic interest is unequaled in this country.

The rates of fare will be the same by all of the lines and while they have not been agreed upon, they will positively not be more than one and one-third fare for the round trip. The one way rates ars as follows from St. Louis $19.25, Chicago $17.50, Cincinnati $14 00, Indianapolis $16.00, Louisville $16.00.

Tickets will be sold at those places September 1 to 4, inclusive, good to return leaving Washington as late as September 12. Ask for your tickets "via the Chesapeake & Ohio Railway.

If you will advise me what day you will leave any of the places named and whether in the morning or evening and how many berths you will want I will reserve them through to Washington for you.

Write for a copy of "Virginia in Black and White."

E. B. Pope,
Western Passenger Agent, C. & O. Ry., St. Louis.

Eastern Resorts.—Attention is called to the advantages of the Ohio & Mississippi Ry. as a route to the mountain resorts of the Alleghenies and the healing springs of the Virginias and North Carolina, and in connection therewith a brief reference to the distin guishing features of some of the more noted of these places.

Deer Park and Oakland the twin mountain resorts of the Alleghenies are situated in Western Maryland on the crest of the mountains three thousand feet above the level of the sea, and offer such varied attractions as a delightful atmosphere day and night, pure water, smooth, winding roads through the mountains and valleys and the most picturesque scenery in the Allegheny range The hotels are large and commodious and equipped with every modern convenience.

Mountain Lake Park near Deer Park and Oakland is the home of the well known Mountain Chautauqua where ten thousand people annually attend the varied and instructive course of lectures, etc., here provided. The institution will hold its eleventh annual session August 1 to 22, 1893.

These famous resorts are upon the direct line of our through car route to the East; our morning and evening lines of through Pullman sleeping cars from St. Louis to New York passing through them daily.

White Sulphur Springs the leading resort of the Virginias has been a favorite for nearly a century, and now boasts one of the largest and finest hotels in America and its waters have a world wide reputation.

In this region also are Red Sulphur, Warm Springs, Rockbridge Alum, Hot Springs, Healing Springs, Sweet Springs and others, each of which has its own peculiar medicinal properties, as well as the attractions of the beautiful mountain country in which it is situated.

These as well as Old Point Comfort and other resorts of the Atlantic coast are reached direct by our trains from St. Louis, and for points to which sleepers do not run through, direct connection is made in Union Depots, and sleeping car berths may be reserved in advance without expense, on application or telegram to our city ticket offie in St. Louis, thus insuring these accommodations for the entire journey.

Tourist tickets to these and more than one hundred other resorts East and South-east are on sale at offices of the Ohio & Mississippi Ry. in St. Louis and at offices of connecting lines throughout the West, via this line, at excursion rates good for return until October 31.

For further information, address Geo. B. Warfel, General Western Passenger Agent, 105 N. Broadway, St. Louis, Mo.

Another Cut in World's Fair Round-Trip Rates.—A reduction of $5 on round trip rates between Chicago and points south of the Ohio River was agreed upon at the meeting of Southern lines on July 20. The reduction was made by basing upon the $7 round trip rates from the Ohio River. The rates from all points north of the Ohio River were not molested and will remain in statu quo for a few days at least. It is not expected that any new cuts will be made in Ohio River territory for some time, although all the roads are looking for one as likely to come at almost any time.

World's Fair Committee Flunks.—The Committee of World's Fair Exhibiters, appointed to confer with the railroads regarding a reduction in World's Fair rates, has pulled down its flag and abandoned its efforts. J. G. Pangborn, Chairman of the Exhibitors' Committee, addressed a letter to the railroads July 20, saying that the World's Fair Council of Administration had refused to acknowledge the efforts of the committee and had so persistently ignored it that the Committee had no recourse but to discontinue its work. The railroads stood willing to transport a number of editors and their wives to and from Chicago if the Committee would entertain them while there. The Council of Administration declined to grant free admissions to the ladies, and the Committee thereupon quit the task it had laid out for itself.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

Pelvic Abscess.—Laparotomy for Twenty Cases.

BY I. S. STONE, M.D. WASHINGTON, D. C.

When specific infection extends from the vagina to the Fallopian tubes, it will in an incredibly short time, cause salpingitis. The next stage in the period of invasion is quite as uncertain as to time, although uniform in result, a closure of the fimbria upon each other, and an attachment of them to the ovary, or, perhaps, to some other adjacent organ, as for instance, the intestine. Cases frequently occur where the fimbria are spread out over the surface of the intestine like a small placenta. This will give to the examining finger in the vagina, a sensation similar to that occasioned by a pyosalpinx or tubo ovarian abscess. With the finger in the abdomen this is not easily understood as the walls of the intestine are usually greatly thickened and may be mistaken for an ovary, enlarged by suppuration or cystic degeneration.

In the complete closure before implantation we see the typical hydro- or pyosalpinx. There may be only slender attachment by a filament of adhesion of the fimbria to the ovary or intestine, and yet infection may be transmitted in this manner.

In the writer's experience gonorrhea has caused the greater number of cases of pyosalpinx and tubo-ovarian abscess. It may be taken for granted that the pus in gonorrheal cases is not so generally diffused as in pelvic abscess from puerperal infection. Even when an extensive abscess forms, reaching far above the pubis, we may confidently expect a firmer limitation of the pus, less shock from the operation, and a quicker recovery, when the lesion is due to gonorrhea. Not so when the infection is a result of puerperal sepsis, for then we have systemic disease (infection) or "sapremia."

These remarks are preliminary to the subject proper of this paper on "Pelvic Abscess" which nearly always originates in this way. The author, as a gynecologist, would therefore define pelvic abscess as a collection of pus, primarily within the tube or ovary and peritoneal cavity, which has extended by rupture, or otherwise, to involve the peritoneum of the broad ligament, pelvic wall, uterus, intestines, mesentery, omentum, and abdominal parietes. These boundaries are always variable but a distinction must be clearly drawn between tubo-ovarian abscess, and pelvic abscess, the latter generally a result of the former, although occasionally formed by direct infection from the tube without first involving the ovary. The pointing of a pelvic abscess, as is well known to surgeons, must be due to the spread of infection to the subperitoneal (cellular?) tissue, where it meets with diminished resistance, being forced downward by the development of adhesions in the upper pelvis. In dealing with these formidable pus cases one easily becomes acquainted with the facts as stated above.

In a review of these and other operations for pus it has been abundantly proven that these views are correct. It may be asked then where are the cases of "cellulitis," "para metritis" and what is their origin? When an abscess points in the vagina it may have origin in the broad ligament as a result of hematoma as I once have seen and for which I have operated. It may spontaneously open into the rectum as I have also seen. It may, and probably does, originate, as does the abscess which follows appendicitis, first the ovary or tube adhering to the floor of the cul de sac, infection of the subperitoneal (cellular?) tissue and burrowing of pus downward. In appendicitis we have almost precisely the same course, adhesion of appendix to peritoneum, extension of infection through peritoneum and then suppuration. There is the same amount of cellular tissue under the peritoneum in the region of the ileo cecal valve as there is in the pelvis or between the layers of the broad ligament. Therefore the amount of pus present in any case does not represent the quantity of broken down cellular tissue for the pus has another source entirely. I do not wish to ignore the possibility of abscesses having origin elsewhere than in the tubes and ovaries, as in psoas abscess, nor do I wish to omit reference to pyaemic abscess which may occur in any part of the body, as we see occur in the ovary, uterus, mesentery or entirely outside the peritoneum. The limitation of these abscesses is plainly a conservative process (encystment). Peritonitis must exist in these cases. The surgeon who regards each case as one of suppurative peritonitis will not greatly err so far as prognosis goes.

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Diagnosis.—It is useless to attempt in this brief space a reference to diagnosis. Equally difficult would it be to ascertain the extent of pelvic suppuration without recourse to laparotomy. The experienced physician can usually determine readily the extent of suppuration by estimating its effect upon the health of the patient It is useless to discriminate between tubo-ovarian and pelvic abscess before operation. The expert examiner will, as a rule, easily detect the presence of pus, and the competent surgeon will not care to inflict useless pain and cause further extension of disease by repeated pelvic examination after he has once satisfied himself that suppuration is present. What is still more important is this: does the condition of the patient warrant or admit of an operation for the evacuation of pus, and, if so, by what method?

When the operation is completed and the patient is put to bed, the operator can usually give a correct opinion as to the result. When the tubo ovarian abscess has ruptured, leaving the mesentery and intestine to form a part of the abscess wall, we may confidently expect after operation a quick pulse, great shock and an anxious convalescence. The author does not understand the reports of easy recovery after operation for pelvic abscess. Some writers tell of "recovery without incident," "normal convalescence," "uninterrupted recovery" etc. I am quite willing to grant that these cases recover after the first few days of shock and danger have passed, but that they have no "trouble during convalescence" is not in accord with my experience. We have marvellous recoveries, but nearly all of my cases have been rescued from death by operation, and some of them were saved after operation only by dint of hard work and plenty of it, on the part of intelligent nurses. I deny that any patient who has had a prolonged siege of suppurative disease can have a "normal recovery." The pulse will not be normal for days after the operation, and the temperature, while fickle and possibly quite high, or possibly subnormal, is never known to pursue a normal course after this surgery. I do not mean that these patients do not improve from the time of operation in a certain sense, for they are in a condition favorable to improvement, but they are nevertheless ill, and are in need of the utmost care in the after treatment.

Result of Operation.—In twenty cases of pelvic abscess, fulfilling the pathological definitiou previously given and treated by radical operation, five have died. The remainder were cured and are well at the present time. This mortality, if estimated according to the prevalent custom of surgeons, is high; but taken as the writer would have all surgical work, classified with its kind only, the mortality then appears in its true light. It is very easy to get three per cent of mortality in some kinds of pelvic or abdominal surgery, but not in all. The writer has not observed in hospital reports any such classification as he has attempted in this paper and has no statistics, other than his own, to which reference can be made. To compare this surgery with the usual salpingo oophorectomy, or even with operations for pyosalpinx, is about as rational as to quote statistics for amputation of a toe with that at the hip joint.

Spontaneous Evacuation of Pelvic Abscess—Vaginal Incision..—One or more cases of spontaneous rupture of a pelvic abscess have occurred in the author's experience, in which complete recovery resulted. One case in a girl of fifteen at the first or second attempt at menstruation, ruptured through the bowel, plainly a suppurating hematoma. A recent operation for pelvic abscess disclosed a large hematoma (which was thought due to Extra Uterine pregnancy, tubal rupture). This hematoma was just commencing to suppurate and must ultimately have formed an abscess which would have opened in bowel or vagina, as it was already between the layers of the broad ligament.

Several other cases have been seen in private where the abscess pointed and was opened through the vagina, in some cases making fairly good recoveries. It is not possible just here to speak of these cases, but there is clearly no doubt as to the propriety of opening up any abscess which points low enough to reach easily through the vagina. Two of the twenty cases herewith reported were previously treated in this manner, and although they did not recover fully until their appendages were removed, made splendid recoveries afterward. In one of these cases the opening into the sigmoid was found and closed at the final operation.

The list reported here includes every case occurring in my hospital practice for two years. Not a single case was turned away or refused operation. Some of them were "forlorn hope" cases. One patient, after admission, refused operation, left the hospital, returned in a week with severe peritonitis, which vaginal incision and subsequent peritoneal flushing failed to relieve. Four of these cases were known to have resulted from an attack of gonorrhea. One had acute suppurative peritonitis at the time of operation, No. 26. Abortion is set down as the cause of suppuration in some cases, in which gonorrhea may have been present, although positive evidence was wanting. Thus far in my service all efforts to find the gonococcus have failed.

In a series of more than sixty pus cases only one death has resulted from surgery done for the result of gonorrheal infection. This death (No. 2) was due to nephritis which clearly followed upon the attack of gonorrheal cystitis. With this single exception my mortality has been from shock and in cases of systemic infection, and as above stated, after laparotomy for abscess following abortion or delivery at term. Fourteen of this list were white with three deaths; six were negresses with two deaths. I do not for a moment regret having made an effort to save those who died. In two of the fatal cases I may have precipitated the result, and think now that flushing and gauze drainage might have prolonged life. In short "too much surgery" according to Joseph Price, may have lost the cases for me, but I cannot see why the patient is any better for the risk of

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the operation and the anesthetic, unless the source of infection, the pus sac, etc, is removed.

Much has been written about the propriety of separating adhesions. My practice is to always do so if the patient can bear the necessary delay, not otherwise. Several of my cases are now living and in good health, who would almost surely have died of shock had an ideal operation been done. Of those who survived operation I can show very excellent results. Recovery has promptly set in after the shock of operation has passed away. The exceptions are these: one fecal fistula which soon closed; one, and possibly two, infected ligatures with a sinus remaining. Two of these women still menstruated many months after the removal of their suppurating and degenerated appendages. One patient has since borne a child at term.

The following condensed histories will serve to give additional informotion of these cases. With one exception all were done at Columbia Hospital. Dr. Kelly, the resident physician, will furnish any information requested in regard to them.

SYNOPSIS—PELVIC ABSCESS.

Number	Name.—Age.		Cause.	Result.	Remarks.	Date.
1	K.	28	Puerperal sepsis.	Recovery peritonitis but complete.	Eight months since childbirth. Continued septicemia. Disorganized appendages. Intestines matted together. Necrotic adhesions.	July 17, 1891.
2	W.	30	Gonorrhea.	Died of uremia five days after operation.	Nephritis, uremia.. Abscess contained 10 oz. of pus. No peritonitis after operation.	November, 1891.
3	S.	21	Gonorrhea.	Patient had sinus from infected ligature. Still menstruates.	Had large quantity of pus both sides. Very difficult operation. Quick recovery.	November 23, 1891.
4	A.	35	Gonorrhea for years.	Recovery.	Abscess nearly reached umbilicus.	November 30, 1891.
5	G.	30	Abortion, sepsis 3 months.	Died twenty-four hours; shock	Operation similar to last. Patient a negress No peritonitis	December, 1891.
6	G.	27	Abortion, sepsis.	Cured.	Tumor reached far above pelvis. Like a fibroma uteri Patient since gave birth to child at term.	February 4, 1892.
7	A.	19	Abortion.	Died on third day. Bowel injured, shock, peritonitis	The patient went down rapidly. Heart weak before operation, did not recover its tone.	February 17, 1892.
8	H	20	Abortion.	Recovered. Now a blooming girl in perfect health.	Left tubo-ovarian abscess. Right pelvo-ovarian abscess involving bowel.	April 9, 1892.
9	H.	19	Puerperal septicemia many weeks.	Slow recovery, fecal fistula. Mania.	A slight girl. Very ill at time of operation. Good recovery considering critical condition. Fistula gradually healed. Mania for a few weeks after leaving hospital, then recovery	April 20, 1892.
10	F.	24	Puerperal sepsis. Purulent metritis or puncture. Direct infection of omentum and intestines.	Recovered nicely after two days of critical illness.	Uterus opened during operation. Closed packed around with gauze. Intestines much injured in separating adhesions. Many sutures required.	April 30, 1892.
11	G.	30	Puerperal infection. Abscess of nine months' formation.	Recovered after extreme illness Morphia habitue.	Gauze packing with aristol over raw surfaces. Many adventitious coats to pus sac on left side.	October 12, 1892.
12	W.	?	Abortion.	Recovered. Uterus remains firmly adherent to bowel, posterior surface.	This patient had spontaneous evacuation of two large collections of pus prior to operation whice was not unusually difficult.	October 26, 1892.
13	W.	20	Recent abortion. Acute peritonitis.	Died of shock second day.	Operation quickly done, thirty minutes, but should have merely flushed cavity and drained. Intestines injured.	November 7, 1892.
14	R.	40	?	Recovered easily. Shock feared, but did not appear.	Bowel involved and a fecal fistula expected, but did not result. Less shock than in any of these cases. Bore operation well.	December 1, 1892.
15	G.	?	Abortion? Infection.	Recovered.	Sigmoid involved. Necrotic adhesions. Gauze packing.	December 3, 1892.
16	R.	26	Gonorrhea. Acute peritonitis	Recovered after two or three days of anxiety.	Severe shock. Although operation was quickly done, she was critically ill. Quick recovery aftery shock subsided.	December 7, 1892.
17	H.	35	Repeated attacks of peritonitis.	Died four hours after operation.	Morphia habitue. Did not take anesthetic satisfactorily. In constant spasm. Prolonged operation.	June 26, 1892.
18	J.	27	?	Recovered easily.	Large collection of pus had twice been evacuated by vaginal incision. Old tract found and closed.	
19	A.	29	Abortion.	Recovered. Bowel sutured in site of former opening of abscess.	Two years ill. Many attacks of inflammation. Very little shock followed in this case.	April 1, 1893.
20	J.	32	Gonorrhea.	Recovery. Left abscess involving bowel. Sigmoid rent closed Right side less complicated.	Gauze packing. Glass tube. Aristol.	May 20, 1893.

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The Surgical Treatment of "Granulated Lids".

BY A. D. WILLIAMS, M D., ST. LOUIS, MO.

The stubborn nature of Granulated Lids has made their treatment, the opprobium of Ophthalmology ever since Ophthalmology has existed. Any improvement therefore in the treatment of this heretofore most stubborn disease is joyfully welcomed by Ophthalmologists as well as by the suffering people. The quickest, surest and best treatment of such a disease, so common and at the same time so destructive in its results, is certainly a matter of much interest to all physicians.

For two years I have been engaged in developing a new method of treating granulated lids and have pro gressed far enough to be convinced that it is the quickest, surest and best treatment thus far introduced. The primary idea was a mere suggestion by a Russian Surgeon, whose name I do not know and probably I could not pronounce, if I knew it. In Germany there is a treatment for granulated lids, known as "Lattler's operation". This consists in the free and deep scarification of the lids and then curetting them. In describing this operation Darier of Paris says that "a Russian Surgeon" recommends that energetic brushing of the scarified lids with a stiff bristle brush be substituted for the curetting. On this bare suggestion, I went to work two years ago to develop a new or surgical treatment for granulated lids, which has now become standard with me and which I now use in all cases.

The serious objection I had to the curetting was the fact that it was too destructive to the conjunctiva and too much contraction followed. The same objection holds good against the general scarification. In the first case I operated on I scarified all the lids freely under chloroform and then brushed them freely with a small, short stiff tooth-brush. The reaction was great: the lids swelled enormously, but, bad as the lids were granulated and painful as the eyes were from ulceration of both corneæ, the patient not having been able to sleep for more than 2 weeks, they got entirely well in less than 5 weeks. But, satisfactory as the result was, too much contraction of the conjunctiva followed the treatment. This caused me to give up the scarification entirely and rely exclusively on the brushing. Since that first case the Surgical part of the treatment has consisted in the brushing alone.

Operation.—In grown people no chloroform is needed; in children it must be given. A strong cocaine solution is dropped into the eye two or three times freely. The lids are everted, usually one at a time, and the granulations are vigorously, but not violently, brushed with a small, but stiff, tooth brush. The brush part should be small, of oval shape, but the bristles must be the stiffest that can be found and about half as long as the bristles in a tooth brush. I cut an ordinary stiff tooth brush down till it suits my purpose. I continue the vigorous brushing till I think the effect is sufficient, brushing first one lid and then the other. It is impossible for me to say exactly how much brushing is necessary. The object is to rupture or break up the granules and cause their jelly like contents the trachoma essence to escape, thus converting a specific into a traumatic inflammation. When it is supposed that object has been attained, the brushing is sufficient. Under no circumstances should the conjunctiva be destroyed or even seriously injured. In the first few cases I brushed, I proceeded with much anxiety because I had absolutely no intimation as to how far I should go and when I should stop. Now I do not brush the lids nearly so long nor so hard as I did in the beginning, preferring to repeat the operation in a few days, if it is found to be necessary, rather than brush them so violently in the beginning. I find that under the milder treatment the recovery is just about as rapid and favorable as under the severer. During the brushing I have the assistant flood the brush and the brushed surfaces repeatedly with a solution of bichloride of mercury (1 in 500) for the purpose of disinfecting the parts and theoretically at least, to help kill the "frisky microbes". To diminish the pain, which is considerable, the cocaine solution may be repeatedly applied during the operation.

As I now brush the lids it requires only a few minutes to complete the operation. The hemorrhage is usually very profuse and I am always glad of it, because I have found that the cases, that bleed the most, as a rule, get well the fastest.

I have said that the bristles in the brush should be the stiffest to be had. This is necessary because the blood softens them so rapidly they may get too limber before the operation is finished. The operation is applicable to all cases, whether keratitis or ulceration of the cornea is present or not. The reaction, following the lighter brushing, is trivial; following the severer brushing, it was often very great, causing much swelling of the lids and considerable pain. A thick whitish deposit of lymph always forms on the brushed surfaces. This slowly comes away in the form of mucus matter. The discharges do not seem to be infectious; at least only mildly so.

After Treatment.—If the reaction should cause pain enough to prevent sleep, I order an opiate at night. As I now operate this is rarely needed. Formerly I had to use it in nearly every case for a night or two. Right away next morning I apply the bluestone lightly to the everted lids. This dissolves the lymph deposit on the lids and it comes away in the form of a milky fluid, which I wipe off with a dry rag. I repeat the bluestone application daily. The lymph deposit cleans off in about 4 days entirely. If keratitis or ulceration is present I sometimes use atropine, but not always. I have been using bluestone in all cases whether the cornea was involved or not. Lately I have begun to apply nitrate of silver solution to the lids daily after the brushing and believe it is going to prove to be

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more effectual than the bluestone, but cannot say positively as yet. In ten days to two weeks I repeat the brushing, as in the beginning, if I think it is advisable. In the first 2 dozen cases I operated I had the patients use a bichloride solution, 1 in 5000, every hour while awake. In the more recent cases, I have not used this solution and the eyes have progressed about as well as when it was used. A case operated upon last week is dropping the solution in 5 times a day and I will have a case operated today (1st Inst) use it in the same way. The only object in using this solution is to catch and destroy all wandering microbes that may be present. Further experience will have to prove or disprove its usefulness.

THE RESULTS.—I have heretofore published in detail the reports of the first 10 cases I operated upon. Since then I have not kept an exact history and daily record of the cases, but I have operated on altogether about 80 cases, comprising all kinds, stages and degrees of granulated lids. In a general way I will say that all of the cases progressed rapidly and most of them got practically well in from one to eight weeks. A few of the cases, about half a dozen, proved to be more stubborn than the rest, the time required extending to 10 to 12 weeks. The latter class comprised mostly the cases where the lids were badly granulated and the balls were covered more or less with pannus. I find that it takes, as a rule, longer to get rid of the pannus than it does to cure the granulations. In a few of the cases the lids healed or cicatrized completely within a week. These cases were those in which the granulations had partly cicatrized or absorbed before the lids were brushed.

In all the cases the brushing operation was made at once, regardless of the condition of the cornea, and uniformly the keratitis and ulceration began to heal promptly and rapidly progressed till the healing was completed. In cases where the eyes were painful the suffering promptly ceased. I now have a case on hand who had not been able to sleep on account of severe pain caused by a large ulcer on the lower part of the cornea for 5 weeks, within 2 days the pain ceased and he has lost no sleep since. This too in spite of the fact that bluestone was applied daily, but lightly, to the lids. Had the lids not been brushed I would not have dared to apply the bluestone to them at all. The brushing of the lids therefore is not contra-indicated in keratitis and ulcers of the cornea; on the contrary, the brushing is the best means of getting the cornea to heal promptly. I have had a few relapses, but not nearly so many as I used to have in the old treatment of granulated lids. The relapses were mostly in the form of keratitis or ulceration of the cornea.

The advantages of this surgical treatment over the old method of treating granulated lids will readily appear from a moments contrast. The surgical treatment promises with much certainty to get a bad case well in from 8 to 12 weeks, while the old treatment required from 3 to 12 and often 18 to 24 months to finish up a bad case with a good deal of uncertainty at that. A corresponding saving in time and expense to the patient is the result.

In conclusion I will say that in my judgment the surgical or brushing treatment for granulated lids is the quickest, surest and best. Heretofore I have rather shunned bad cases of granulated lids, but now I gladly undertake them because I feel that I am able to make rapid progress in getting them well.

Finally I wish to say that this method of treating granulated lids is still in process of development and great improvement may yet be effected. What I have said gives the present status of this method of treatment.

Artificial Feeding of Infants.

BY R. F. KIEFFER, M.D.,

Professor of Diseases of Children and Clinical Medicine, Barnes Medical College.

Artificial feeding of infants when measured by its immediate and remote results becomes one of the most important departments of the study of medicine. Until recent years no branch of medicine received so little attention. The mortality of artificially fed infants was very high. When fresh milk could be secured and the surroundings were favorable, many survived the first hot season only to succumb the second with digestive derangements, a consequence of faulty artificial feeding. In large cities where all the circumstances bearing upon the mortality were unfavorable, the death rate was truly appalling. J. Lewis Smith says: "Several years ago, before the New York Foundling Asylum existed, the foundlings of New York, were taken care of by the pauper women of the alms house. The foundlings were given cows' milk prepared by these women. Incredible as it may seem, the deaths corresponded with the admissions, only one infant was pointed out which had survived the first half year in the almshouse."

At last, however, an awakening to a fuller realization of the shortcomings and responsibilities in the care of infants deprived of mother's milk prompted faithful investigation with very gratifying results. The subject has been simplified and placed upon a scientific basis. Results formerly thought to be unavoidable are now known to depend upon the violation of well understood dietetic principles. These unfortunate specimens of humanity have some show in the race of life.

Nor can our interest in the matter abate. It is too intimately associated with the prevailing customs and the tendencies of the times. There is a growing disinclination on the part of mothers who are able to nurse their babies to do so, because of its interference of their notion of the demands of society. This is especially true of the women of our cities. The number of mothers who are desirous of suckling their infants, but who are physically unable to do so, is also growing. This is one of the results of our present in door method of raising girls, associated as it is likely to be with violations

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of physiological laws in the matter of dress, simplicity and regularity of habits and mental over-taxation. The prevalent notion of regarding the education of males and females in all departments of science as of equal importance, and requiring as much progress of them at the age of puberty as the sturdier sex, who enjoy better opportunities for out-door exercise, and whose systems are not making such great developmental strides, is pernicious. It diverts from its intended purpose a share of the energies which should be expended in the development of the procreative apparatus, and tends to a dwarfing of the mammary glands as well as of the organs from which they receive the reflex stimulus necessary to excite them to a state of functional activity, and partially, or wholly, incapacitates them for providing their offspring with Nature's elixir of life. The classical training of females begets a greater degree of independence of thought and action and ability for self-support, which, together with the time necessarily occupied in completing such a course of study, are the principle factors of the present growing disposition to a postponement of marriage to a later date in life. The longer the mammary glands are dormant after full development the less likely is the mother to be able to furnish a satisfactory supply of milk for her infant.

For these and other reasons the artificial feeding of infants must occupy an increasing share of our profes sional attention.

There are three periods of an infant's life which may reasonably be considered critical:

1. At birth before the function of digestion is well established. The law of instability of function of organs recently brought into use, or, in other words, which have not been educated, for the performance of the work for which they were intended applies here. A slight deviation from the proper quantity or quality of food will cause considerable, sometimes dangerous, derangement of the digestive function.

2. At about six months of age, when, in addition to the irritation of dentition, the infant is apt to begin to partake of food to which it is unaccustomed, on account of a partial failure of its supply of breast milk, or, the mother, through ignorance concludes that her infant has arrived at that stage of growth when it may with impunity begin the use of solid food; or, perhaps, its bowels have been moving sluggishly and she has noticed that a moderate quantity of food from the table insures greater frequency of its motion.

3. At the time of weening when a more or less radical change of diet must of necessity be inaugurated. Not that the infant is at all other times exempt from the laws governing digestion; but that these are the periods when the rules which have been in operation all along are most apt to be violated.

Among those who accept the modern teachings of evolution there can be no difference of opinion respecting the superiority of the milk of a mother for its young over all other kinds of food. This law of adaptation to the needs of the offspring applies to the digestibility as well as to the composition of the food. The younger the infant the greater the necessity for an observance of this law. This taken for granted, the proper course to pursue in the feeding of an infant deprived of its natural food is apparent,—determine by analysis the exact chemical and physical composition of the milk of a mother, and, by synthesis, construct a milk which shall be in every respect the closest possible approach to the formula of the standard we are endeavoring to copy. The logic of this plan cannot be questioned.

Samples of mothers' milk for analysis should be selected with due regard for the many circumstances capable of exerting a modifying influence on its composition. Milks of different mothers, as well as specimens of the same mother, variously taken, show quite a range in the relative proportion of their constituent elements. The first milk of a milking is poorer in solids than the last. Retention of milk in the gland makes it poor in solids, while milk recently secreted is rich in solids and correspondingly more difficult of digestion, a fact too often disregarded in the management of babies suffering with digestive derangements. They are kept at the breast to keep them quiet with the result of giving them food difficult to digest when the most easily digested food is indicated. Diet, exercise, gestation, menstruation and intense mental emotion of any kind are capable of exercising a considerable modifying influence upon the composition of milk.

Cows' milk is the best basis for an artificial food. The milk of some other domestic animals may approximate a little more closely the composition of mothers' milk, but not enough to obviate the necessity of their modification Neither does the slight difference in their favor simplify the process.

The secretion of milk by the cow is subject to the same modifying influences already enumerated as altering the composition of mothers' milk; but owing to the relatively feebler development of its emotional nature and the greater degree of regularity and simplicity in the habits and diet of the cow, its milk is usually more uniform in composition. The difference in the relative amount of solids in the first and last milk of a milking, and between milk that has been long retained and that recently secreted, observes the same laws as apply in the case of mothers' milk, and to an equal degree.

Analyses of many samples of mothers' and cows' milk selected with due regard for the above mentioned modifying influences gives the following average composition of the two milks:

	MOTHERS' MILK.	COWS' MILK.
Fat. . . .	4 %	4 %
Sugar. . . .	7 %	4 5%
Proteids. . . .	1 %	4 %
Ash. . . .	2 %	7 %
Water	87.8%	76.8%
Reaction. . . .	Alkaline	Acid
Sp. gr. . . .	1031.7	1029

The fat is seen to be equal in proportion, does not differ in quality and requires no modification.

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The proportion of sugar in cows' milk may be made to equal that in mothers' milk by adding 2.5 parts per hundred.

The greater quantity of ash in cows' milk does not interfere with digestion, is eliminated without injury to the emunctories and needs no modification.

Cows' milk is acid in reaction, while mothers' milk is alkaline. Both are so nearly neutral that an ounce of lime water to the pint is usually sufficient to make cows' milk conform to the reaction of mother's milk.

Mothers' milk, as received by the infant from the breast, is sterile. Cows' milk always becomes more or less contaminated during and after milking and requires sterilizing to make it conform to mothers milk as nursed by the infant. The present prominence of the germ theory has stimulated the expectations of some investigators to the belief that the biological character of milk is of more importance than its composition. They claim that sterilization and alkalinization is all the modification cows' milk requires. An extended trial demonstrates that this is a step in the right direction but does not reach far enough.

The proteids of cows' milk largely preponderate and its indigestibility for infants mainly depends upon the fact that during digestion they coagulate in large hard masses instead of the light flocculi of mothers' milk. Dealing with the albuminoids is the chief problem in humanizing cows' milk. No method has yet been devised for reducing them to the proportion found in mothers' milk without otherwise altering the milk.

This objection can in a great measure be overcome, so far as the indigestibility of the milk is concerned, by a pre-digestion of the proteids with extraction pancreatis according to the following formula:

℞ Extractum pancreatis, - - gr.v.
Sodæ bicarb., - - - - gr.xv.
Aquæ, - - - - - - ʒlv.

Shake and then add one pint of fresh milk and put in a water bath with a temperature of 110° F. till slightly bitter. Then remove and place on ice till ready for use. If ice is not at hand, heat to a boiling temperature. Cold merely suspends the action of the ferment while boiling destroys it. The milk should be sterile before being peptonized.

When circumstances are unfavorable for a quantitative modification of cow's milk, peptonization promises the best results. It is a great improvement over modified cows' milk or over milk merely sterilized and alkalinized, and is a good substitute for mothers' milk for a short period. There are substantial reasons, however, why it should not be continued for a long time. The superabundance of albuminoids have not been removed. Their digestion has merely been aided. We have rather forced the digestion of a larger quantity of nitrogenous food than is shown to be necessary by an analysis of mothers' milk. The dangers incident to indigestion are avoided, but the risks of what might be termed an artificial gluttony are assumed.

The condition known as lithemia, or uricemia, is very common, being a factor in most of the ailments of persons of a naturally very robust constitution; and we are all well acquainted with the fact that it depends upon a disproportion between the amount of physical exercise taken and the quantity of nitrogenous and saccharine food consumed. This condition may be said to be normal in the newly born infant, and depends, in part at least, upon the over abundance of these elements in the milk during the colostrum period. It is always easily set up in table-fed infants and young children, and is the leading pathological factor in nearly all cases of enuresis and lithiasis. Forty per cent of the lithotomies are performed upon children under ten years of age. A long continued use of peptonized milk in liberal quantities invites these risks, and should, therefore, never be used save in emergencies.

Other measures have been tried to prevent the coagulation of the proteids in hard masses such as dilution with some liquid containing starch or dextrin to mechanically separate the parts of the lump. These measures are based upon the supposition of a chemical difference between the albuminoids of mothers' and cows' milk. The experiments of Prof. Rotch have shown that when diluted to the same degree there is no perceptable difference in the curds. That so called attenuants are valueless. The correctness of these conclusions I have myself demonstrated. Therefore, when an artificial milk is constructed containing only normal proportion of proteids, there is no need of using digestive ferments.

When fresh cream can be obtained containing a known proportion of fat such milk is easily made. The centrifugal separaters in use in most creameries produce such cream containing from 16 to 20% of fat.

With such cream a formula closely opproximating mothers' milk is as easily deduced as one to secure the proper dosage in psescription writing. When a cream is 18 66% fat the following formula will produce the milk above mentioned as ideal food:

℞ Milk, - - - - ʒij.
Cream, - - - - ʒiij.
Sugar, - - - - gr.xlv.
Water, - - - - ʒx.
Lime water, - - - ʒj.
M.

This should be put in bottles large enough for one mess and sterilized. If the temperature is raised to 212° F., it causes a reaction between sugar and lime, for which reason the lime water should be sterile and added just before using, if the milk is to be boiled.

Boiling often develops an unpleasant taste and aroma and is therefore more or less objectionable to the infant. The temperature of 167° F. does not destroy all the germs and spores, but renders them inactive for from thirty to thirty-six hours, and, for immediate use, fulfills all indications. No unpleasant taste or odor is developed, it permits the addition of the lime water before heating and is less objectionable for the infant.

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The digestibility of the milk is not changed by either method of sterilization.

Sterilizing at a boiling temperature is a very simple procedure, a common colander over a kettle of boiling water answers the purpose admirably. Maintaining a temperature of 167°, or a degree of heat not much above it, is not quite so easily accomplished without a special apparatus. After the desired temperature is reached, however, if the cover is placed slightly ajar for five minutes, there will not be much further rise. Then by removing the sterilizer from whatever source of heat has been employed and keeping it tightly covered for twenty minutes, it will do for all practical purposes. This is the method made use of by Dr. L. Emmit Holt, of New York.

The dosage and interval of feeding are exceedingly important. For an average sized newly born infant an ounce every hour and a half is sufficient. This would be gradually increased to two ounces every two hours at six weeks of age. After this the interval should not be lengthened, but the quantity gradually increased according to the size and vigor of the infant. The interval between meals should be longer at night than during the day from the start. After five or six months of age an infant should not be fed at night at all.

The milk should be administered at a temperature of 99° F., and from a receptacle of simple construction that it may be kept aseptic. The infant should not be required to make much exertion in securing its food.

As for the many so-called infant foods on the market none conform so closely to mothers' milk as the above formula; and should never be recommended, save on the principle of choosing the lesser of evils. Some are easily digested but deficient in nutriment. Others contain articles foreign to the composition of mothers' milk and cannot be too severely condemned.

Spontaneous Rupture of the Symphysis Pubis During Labor.—Oelschlager (*Centralbl. fur Gynakol*) has reported the case of a primipara, twenty years old, in which with the onset of labor pains two eclamptic attacks occurred in quick succession. The lower extremities were edematous, and the urine contained a small amount of albumin. The promontory of the sacrum could be touched with two fingers introduced into the vagina. The head was quite high in the pelvis and but slowly followed in the grasp of the forceps, a not excessive degree of traction being exercised. As the head began to rotate in the small pelvis a crack was distinctly heard. Examination disclosed a separation of 1.15 inches in the situation of the symphysis pubis, and the delivery of a living child weighing nine pounds was soon readily effected. On the day following the labor a leather support was applied to the hips. For two weeks the region of the symphysis was tender upon touch and painful upon movement, but a week later the woman was able to be up and about, although a slight degree of separation of the pubic bones persisted.

EDITORIALS

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Formalin.

A harmless and at the same time very efficacious antiseptic seems to have been discovered in the drug called formalin. This is a forty per cent aqueous solution of gaseous formaldehyd and its bactericidal properties are equal or almost to that of bichloride of mercury, while carbolic acid is according to Koch, Guttmann, Mercke, and others, much less reliable in this respect than what it has been supposed to be.

Sublimate has many disadvantages as far as disinfection of the living body is concerned as well as the destruction of the pathogenic germs surrounding it on account of its highly poisonous properties, in consequence of which its employment becomes in many cases an absolute impossibility. All other known disinfectants, phenol, kresole, chlorin, bromine, iodin, etc, are much inferior to sublimate in disinfecting qualities, so that an absolutely reliable drug in such concentration as is necessary for practical disinfection, has so far not been known. According to J. Stahl (*Pharm. Zeitung*, 1893, p. 173), formalin possesses germicidal properties similar to those of sublimate without its poisonousness and is applicable not only for moist, but also for dry and gaseous disinfection.

It was according to Stahl a very happy idea to introduce this drug in particular into the technique of disinfection.

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Loew, Aronson, Berlioz and Trillat have written up-

on the bactericidal qualities of formaldehyd, but the drug has remained unnoticed by others for six years; but since the technical difficulties in the manufacture of the drug have been overcome and after Stahl has worked out the bacteriological foundation for its practical use it has become introduced into practice.

Berlioz and Trillat have demonstrated the fact that anthrax-bacilli are destroyed in a solution of 1:50,000. Aronson's researches show that typhoid bacilli and staphylococcus pyogenes aureus lose the property of multiplying in a dilution of 1:20,000.

The most resistant of all pathogenic micro organisms, the anrhrax-spores, are killed by being acted upon by a solution of 1:1,000 for one hour and by 1:750 for fifteen minutes. If one compares with these results those obtained with sublimate, it is plain that formalin is the equal, or almost so, of sublimate in bactericidal properties, while in this respect all other known drugs are lagging far behind these two.

If one is to decide between the use of the two as bactericidia the formalin must unquestionable be preferred. For it is not only the powerful poisonous action of sublimate, but also the fact that it loses its bactericidal properties in consequence of the formation of albuminates of mercury when it comes in contact with the tissues or fluids of the body that make the use of formalin preferable. Even a twenty per cent solution of formalin does not produce coagulation of albumen.

Researches as to the bactericidal power of formalin-vapors have shown that air containing 3.5 volume-per cent of formalin will kill micro-organisms, the spores included, in fifteen minutes.

Cotton that had been placed for a few days over a mixture or formalin and formalith absorbed up to 1.5 per cent formalin. By this means bandaging material may be kept completely sterile; even anthrax-spores with which such cotton has been infected were found to be destroyed in a short time. This fact is of great importance since it is the endeavor of modern surgery to procure sterile bandaging material in as simple a way as possible ond to keep it sterile up to the time of usage.

The sprinkling of wall paper a single time with solution of formalin suffices to kill anthrax spores in fifteen minutes; even solutions which contain only 0.25 per cent.

The quantity of a 0.5 per cent solution of formalin used for disinfection of paper and wall paper on an average amounted to eight cubic-centimeters for each square-meter surface. The color of the wall paper and other goods is in no way changed or destroyed by the process.

Inhalation of formalin-vapor has no injurious effect upon animals. Men that work daily in Schering's factory in an atmosphere impregnated with vapors of formalin were feeling entirely well. After entering the blood formaldehyd has, according to Aronson, a slightly greater toxicity than carbolic acid. A forty per cent solution of formaldehyd therefore possesses only one-half the toxicity of carbolic acid but more than forty times its antiseptic power.

Tropacocaine.

We have drawn attention to tropacocaine in the REVIEW of May 20, 1893, and now take the liberty of publishing some of the results obtained with the drugs.

Dr. Adolf Alt, in the *American Journal of Ophthalmology*, writes: The new alkaloid, according to *Merck's Notes on New Remedies*, was isolated by Giesel from the narrow-leafed coca plant of Java. Lieberman who examined it chemically pronounced it to be benzol-pseudo-tropeine. By hydrolysis it was decomposed into benzoic acid and pseudo-tropeine, the latter body being chemically identical with the pseudo-tropeine from hyoscyamus niger. Its close connection with the tropeine group and atropine, concerning which Ladenburg's clinical researches have discovered so much, was established. The reconstruction of the alkaloid under consideration from its products of decomposition, benzoic acid and pseudo-tropeine, in the same way as cocaine is prepared from benzoic acid and ecgonine, also recalls its relation to the latter alkaloid. To avoid the cumbrous systematic name, and to recall its chemical relations as its occurrence in a coca species, the name tropacocaine has been given to it.

Chadbourne's experiments on animals and his experience as well as that of Schweigger, Silex and others, on human subjects have shown that tropacocaine is a powerful local anesthetic. Its action resembles that of cocaine, but it is not identical with it. It does not cause the ischemia of true anesthetics like cocaine, nor the irritation and hyperemia of Liebreich's group of anesthetics. Compared with cocaine, tropacocaine is much less toxic, since it exerts much less of a depressing action on the cardiac motor ganglia and on the heart's muscle. Local anesthesia is completed much more quickly and continues longer (? Ed.). In the eye hyperemia is occasionally caused by it, but it quickly disappears; mydriasis occurs, but not as a rule, and it is always less than after cocaine. In ophthalmic practice, tropacocaine appears in most cases equal to, and in some superior to cocaine. At any rate it appears to have a great future in this direction. Those who have tried it, prefer its employment in the removal of foreign bodies from the cornea. Schweigger did a painless iridectomy in less than two minutes after the instillation of tropacocaine, and a tenotomy within half a minute after, which was reported as painless.

The solution used in the experiments described above seems always to have been one of three per cent. It is, furthermore, claimed for this solution that it has a slightly antiseptic quality and that its anesthetic action does not spoil with age, as it is said of cocaine-solutions.

Through the kindness of my friend, Dr. C. O. Curtman, Professor of Chemistry, in the Missouri Medical School, I received fifteen grains of hydrochlorate of tropacocaine, which was generously given for experimentation by the

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owners of the Mallinckrodt's Chemical Works of St. Louis and New York.

A three per cent solution of this salt I have for a month used in my practice in all cases in which I have been accustomed to instill cocaine. The results of these experiments are the following:

The instillation of one drop of this solution causes in the vast majority of the patients momentarily a very pronounced irritation, with considerable hyperemia of the blood-vessels, and sometimes pain and profuse lachrymation. These symptoms, although in themselves trifling, are so different from the sensation which a four per cent solution of cocaine produces, that most of my patients spontaneously asked, what new medicine I had instilled.

Total anesthesia of the conjunctiva and cornea is reached in some cases in half a minute, in others it takes a minute or more. When no second drop is instilled this anesthesia begins noticeably to wane after about six minutes, but is rapidly re established by a new instillation.

I have never seen any general toxic symptoms from repeated instillations and subcutaneous injections.

Foreign bodies can be quickly removed from the cornea after the instillation of one drop of the solution.

The application of caustics to the conjunctiva causes less pain than it does after cocaine, neither does the pain seem to last as long.

In operations on the eyeball my experience has not been as brilliant as that of former experiments. Several patients on whom I made tenotomies of the external muscles felt the pain very keenly when the tendon was cut. In iridectomies the cutting of the cornea was painless but the cutting of the iris was felt painfully. I used tropacocaine in one case of simple cataract extraction and I shall not use it again. The hypotonus which is produced by cocaine anesthesia, I have always looked upon as a great help in cataract extraction and a barrier against prolapse of the vitreous body. In this case of cataract extraction with tropacocaine no hypotonus existed, rather perhaps an increase of tension, at any rate the easy expulsion of the lens was at once followed by a small prolapse of the vitreous body, an accident which has not occurred to me in many years. In several cases of ulcers of the cornea the galvano-cautery seemed to be felt more painfully than with cocaine.

Tropacocaine is, from all this, undoubtedly a strong local anesthetic. However, I do not see that it is greatly superior to cocaine in opthalmic practice, unless it be for its quickness of action. In surgical operations where local anesthesia can be produced by repeated subcutaneous injections its comparative freedom from toxic properties is likely to render it more valuable than cocaine.

The price of tropacocaine is given at $5.00 per gram (grs. 15), which in comparison with the small advantages which it has over cocaine, is rather against the general use of this drug.

Dr. Hugenschmidt (*La Semaine Medical*) confirms the results of Chadbourne's experiments with tropacocaine. The ingestion of one-third or two-thirds of a grain produced no appreciable effect on an adult. When two-thirds of a grain were injected rapidly into the region of the lower maxilla, vertigo, uneasiness about the heart, and a marked fall of blood pressure were observed within three minutes. The effect was transient, and in ten minutes the pulse returned to normal. Doses of one-third to two-thirds of a grain do not affect respiration, whereas it is easily affected by full doses of cocaine. The above doses produce no effect on the nervous system, whereas similar doses of cocaine often produce marked symptoms of cerebral anemia. Tropacocaine exerts no influence on the vaso-motor system. Dr. Hungenschmidt believes that tropacocaine is likely to prove of great value as a local anesthetic. He employed it as such in thirty-seven cases, never exceeding five-twelfths of a grain, usually in the following solution:

℞ Tropacocaine, - - - - - gr. ij.
Distilled water, - - - - - ʒj.
Sig. Ten minims for an injection.

It is of the greatest importance that the injection should be made slowly. One-third of a grain was found sufficient to produce anesthesia when the injection occupied fully one minute. With this dose no toxic symptoms were observed in the thirty seven cases.

Dr. Hugenschmidt claims for tropacocaine the following advantages over cocaine.

1. Being prepared synthetically, it is less liable to variation than cocaine which is obtained directly from the plant.

2. In equal doses, consistent with the production of anesthesia, tropacocaine is less toxic than cocaine, and exerts very little influence on the vital functions of the organism.

3. Local anesthesia is produced more rapidly with tropacocaine, and lasts the same time as that produced by cocaine.

4. Tropacocaine being antiseptic, its solution can be kept unaltered for months, whereas solutions of cocaine have a tendency to undergo decomposition and lose their analgesic properties after four or five days.

Ptomaine Poisoning.

Dr. J. C. Gilbertson, of Luverne, Minn., writes upon this subject in the *R. I. Medical Science Monthly* as follows: Many of the common ailments or diseases that the human race is heir to are now universally conceded to be caused by living organisms. Bacteria or microbes have been wandering about upon the face of this earth for nearly 6,000 years, seeking whom they may devour. So deadly and so appalling has at times been their work that humanity has time and again cried to heaven for deliverance. Yet so successfully have these germs labored in disguise that it is only in the latter part of this nineteenth century that they have at all been discovered. The scientist and microscopist, the chemist and bacteriologist of the last ten or twenty

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years have somewhat succeeded in piercing the curtain and viewing a few of the hitherto unknown actors.

Bacteria are the lowest forms of vegetable life They are minute, unicellular in structure, and multiply by division and the formation of spores. They split up complex substances into simple elements through the process of putrefaction. Most bacteria are harmless, but some after gaining admissiou to the body are capable of producing disease and are known as pathogenic.

Recognizing the fact that germs do bear a causal relation to some diseases, the question arises, how do these organisms produce disease? Several theories have been advanced:

1. The germs deprive the blood of oxygen.

2. The bacilli accumulate and form mechanical obstructions in the vital organs.

3. The bacilli consume the protoids of the body.

All of these theories have been shown to be defective and none are at the present satisfactory. Hence a fourth and generally accepted theory:

4. Bacteria during their growth elaborate a chemical poison, which is soluble, and which when introduced into the circulation produces fever and the characteristic symptoms. This chemical poison is known as a ptomaine. We will then define a ptomaine as a product of bacterial decomposition. Vaughan gives an explanatory definition and defines a ptomaine as "a chemical compound which is basic in character and which is formed by the action of bacteria on organic matter."

A large number of the ptomaines are inert, others highly poisonous. We will consider the latter only.

This bacterial decomposition may take place in or outside the body. We will therefore consider ptomaine poisoning in relation to the body from external and internal causes.

I. External causes. Whenever bacteria have under favorable conditions attacked matter outside of the body, and by decomposition have elaborated their characteristic poison, and this again has gained admission to the body, generally through the alimentary tract in food or drink. Under this head is poisoning from ham, sausage, oysters, mussles, milk, cream, cheese, etc. We will not discuss each in detail. The ptomaine gaining admission is already in a soluble state, is quickly absorbed, and symptoms usually develop early. There is much similarity in symptoms and they may be grouped under the following divisions:

1. A true gastro-intestinal irritation, in which we have vomiting, purging, cold, clamy skin, anxious countenance and much depression.

2. Purely nervous, sensation of heat, itching, nettle-rash eruptions, swelling, asthmatic breathing, etc.

3. A kind of intoxication, in which we find dizziness, muscular weakness, muscular spasm, paralysis, coma and death.

Treatment—Preventive and symptomatic.

II. Internal causes.

Most of the infectious diseases, suppuration, puerperal fever, etc., are conceded and many proven to be due to pathogenic bacteria. We will consider a few:

Diphtheria.—Says Vaughan: "That the Löffler bacillus is a cause of diphtheria no one can now deny. The fact that this germ, although found only at the seat of inoculation causes marked systematic disturbances, indicates that its action must be due to its soluble products." The bacillus gaining admission to the body and finding lodgment in its favorite location about the tonsils, in the pharynx, larynx or nares, acts as a local irritant producing an exudative inflammation. In so doing it first induces death of the cells with which it comes into contact, particularly the superficial epithelium and the leucocytes. The further action of this necrosed tissue and of the bacilli results in the elaboration of a ptomaine which is soluble, becomes absorbed into the circulation and produces the marked systemic infection. From this point of view we consider diphtheria as primarily a local disease, and the constitutional disturbances as due to poisoning by the ptomaine of the diphtheric bacillus.

Typhoid Fever.—Most of the bacteriologists and the profession at large believe that the bacillus of Eberth is the specific cause of typhoid fever. To this belief Vaughan and a few others take exception. At present, however, I am willing to recognize Eberth's bacillus as a cause of typhoid fever. This bacillus, if it succeeds in passing the stomach without being destroyed by the gastric juice, seems to have a special affinity for Peyer's patches of the small intestines. Here it acts as a local irritant, causing hyperemia, death of cells and necrosis, and in so doing elaborates its characteristic poison, by some termed the "typhotoxine," which is largely responsible for the marked constitutional symptoms.

Tetanus.—The bacillus of tetanus is primarily a native of the soil, but is frequently found on rusty nails, fork tines, splinters, etc. The bacilli, I believe, have never been found in the blood or tissues beyond the point of introduction. Their action is entirely local. Here they multiply and elaborate their ptomaines, which have a special action on the spinal cord and spinal centers.

To bring to a close I am inclined to the following deductions:

1. Pathogenic bacteria cause disease by the elaboration of ptomaines.

2. The primary action of pathogenic bacteria is local and the constitutional disturbance is brought about by the absorption and action of ptomaines.

How, then, are we to meet and counteract these conditions? Bacteria, being living organisms, are made inert or destroyed by antiseptics and germicides. Ptomaines, being chemical productions, remain uninfluenced thereby.

Our first effort then becomes to destroy the bacilli, and as far as possible to prevent the elaboration of ptomaines. This is best accomplished by early, thorough and continuous local antiseptic treatment.

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Our second effort is to counteract the depression and marked constitutional disturbance caused by the absorption of the chemical productions. This is best accomplished by supportives, stimulants and remedies to counteract the prominent symptoms as they arise.

Hydrastinine in Uterine Hemorrhage.—Gottschalk (*Brooklyn Medical Journal*) says hydrastinine may be employed:

1. First of all, in those uterine hemorrhages which are traceable to a pronounced congestion of the uterus. To these belong, above all, the often very profuse menorrhagias of spinsters, in whom there is no pathological change in the condition of the genitals. In some of these cases it is possible to obtain a permanent result, so that even after a discontinuing the remedy the menstrual flow remains smaller.

2. Also in hemorrhages which have their pathological and anatomical cause in endometritis, hydrastinine will lessen the quantity of blood; but here, according to Gottschalk's experience, the action is only palliative, not being sufficient alone to cure the local cause of the trouble.

3. For prophylactic or intermenstrual use, hydrastinine is useful before or during the first returning profuse menstruation after an abrasion of the uterine mucosa. It is well known that this menstruation, usually occurring after six weeks, is often very profuse. In the very cases where there was great loss of blood before the operation, it is of great importance to prevent further profuse hemorrhage. This is possible if the treatment with hydrastinine is begun several days before the expected menstruation, and, if necessary, continued during the duration of the menstruation.

4. Menorrhagias caused by retroflexio uteri are best treated by correction of the malposition; but for cases of fixed retroflexion, where the reposition is not yet possible, hydrastinine is a commendable remedy.

5. Secondary uterine hemorrhages—*i. e.*, those caused by a change of the adnexa and their surroundings—offer a large field for the successful use of hydrastinine. To these belong the menorrhagia and metrorrhagia with pyosalpinx, oophoritis, ovarian tumors, and exudations. Of course, the cause of the trouble is not influenced by the remedy.

6. Climacteric menorrhagias are much diminished by a faithfully carried out hydrastinine treatment.

American Medical Association.—At the forty-ninth annual meeting of this Association the Section of Ophthalmology elected the following officers for the ensuing year:

President—Dr. A. R. Baker, Cleveland, Ohio.

Secretary—Dr. L. H. Taylor, Wilkesbarre, Pa.

The Executive Committee consists of the former chairmen—Drs. S. D. Risley, of Philadelphia; J. L. Thompson, Indianapolis; and F. C. Hotz, Chicago.

ABSTRACTS

The Action of Alkalies on Human Gastric Digestion.—The frequency with which bicarbonate of soda is employed in gastric affections renders any contribution that enhances our knowledge of its action of interest to the profession. Dr. G. Linossier and Dr. G. Lemoine have published in the June number of the *Archives Generales de Medicine* a valuable paper detailing the results of certain observations regarding the action of bicarbonate of soda and of carbonate of lime in a case of merycismus (*Jour. Am. Med. Ass'n*). Test meals consisting of 80 grams of bread, 80 grams of meat, and 250 grams of water were eaten by the patient, and every hour samples of chyme were obtained from the mouth into which it entered by the process of rumination. Under ordinary conditions in this patient the total acidity of the chyme was slightly pronounced, diminishing from the first to the third hour after a meal; the hydrochloric secretion was also sensibly inferior to normal, and all the usual tests showed that there existed a marked insufficiency of the gastric secretion.

The patient was then placed upon treatment of bicarbonate of soda, administered in doses varying from 7½ to 160 grains, and given in one of three ways: in the first, bicarbonate of soda was taken one hour before the test meal; in the second, it was taken at the commencement of or immediately before the meal; in the third, one hour after the meal.

Careful analyses of the gastric contents showed that bicarbonate of soda, in large or small doses, is an excitant of gastric secretion. The excitation of the secretion has for its first effect a saturation of the alkalinity that was always perceptible in the first analysis made after ingesting the drug in doses of 150 grains. When the dose of bicarbonate of soda is small the excitation occurs after the saturation of the alkalinity, and provokes a slight transient increase of hydrochloric acid in the chyme. If the dose is medium the excitation is more prolonged, the maximum of the proportion of hydrochloric acid in the chyme being increased although attained more slowly. If the dose is strong the secretory energy of the mucosa is exhausted in antagonizing the alkalinity and the normal proportion of hydrochloric acid may not be attained when the gastric contents pass into the intestine. The maximum proportion of hydrochloric acid in the chyme is attained in two hours after a dose of 7½ grains, in three hours after a dose of 15 grains, and in four hours after a dose of 75 grains.

The production of the organic acids of fermentation is favored by the administration of bicarbonate of soda; these acids with the hydrochloric acid contributing to saturate the alkalinity. Their production is also prolonged when the normal acidity is exhausted.

The excitant action of bicarbonate of soda on the gastric secretion is manifested in the greatest intensity when it is administered one hour before the meal; 15

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grains acting as a feeble; 75 grains as a medium, and 150 grains as a strong dose. The first mentioned dose was the only one in the experiments that diminished the formation of the acids of fermentation.

At the commencement of a meal 7½ grains act as a feeble, 15 grains as a medium, and 75 grains as a strong dose; though the soda given at this time suspends the secretion of pepsin.

Administered one hour after a meal the soda exercised a transient saturating action that was not followed by gastric excitation if given in doses of 30 grains; a more prolonged and exciting action being attained by a dose of 75 grains.

Carbonate of lime seems to act pretty much like bicarbonate of soda, as far as saturation of the gastric juice is concerned. A dose of 75 grains has seemed to be followed by a period of excitation, but the quantity of hydrochloric acid is not secreted in a free state as it is when the soda is administered. Furthermore, when the bicarbonate of soda has been administered for some time, its action is prolonged beyond the day when it was last taken; this action being explained by an excitation and prolongation of the secretory activity.

The administration of this drug is therefore indicated in those cases in which there is insufficiency of the gastric secretion (gastric hyposthenia), and it should be taken a certain time before the meal so that there may be a saturation of the alkalinity; and when the food enters the stomach it finds itself in immediate contact with a gastric mucosa in a state of secretory excitation. Prescribed just before meals it temporarily suspends digestion, provokes acid fermentation, and hinders the secretion of pepsin. In hyperchlorhydria, bicarbonate of soda may prove a double-edged sword if employed during the time of digestion; because while very serviceable in diminishing the pain when it momentarily saturates the gastric hyperacidity, yet unskillfully employed there is the risk of increasing the secretory excitation of mucosa already over excited. In such a condition it should be given in a small dose repeated as often as necessary to semi-saturate the acidity and to quiet the pain.

The Pfeiffer-Bacillus—The Causative Agent in Influenza.—Dr. Julius Friedenwald (*Johns Hopkins Hospital Bulletin*) says: Since the epidemic of influenza of 1889-1890 in Europe, many attempts have been made by bacteriologists to discover the causative agent of this disease. In the early months of 1890 the announcement was made by Dr. Julles (Vienna), claiming the discovery of an organism which was similar to the Fraenkel's pneumococcus and which he considered to bear a causal relation to this disease. Klebs discovered organisms in the red blood corpuscles of patients suffering from influenza; Seiffert, peculiar cocci in the sputa of patients, and M. Kirchner, a diplococcus, probably identical with Seiffert's, which he was able to produce in pure cultures. None of the above organisms can now be looked upon as bearing any causal relation to influenza. There yet remains the organism of Pfeiffer, which, having fulfilled the crucial test of the three postulates of Koch, may now be considered as the causative agent of this disease. From the sputum of patients, cover slip preparations can be made, according to Pfeiffer, by staining the specimens in Loeffler's methylene blue or in a weak watery solution of carbol fuchsin. In every specimen numerous influenza bacilli are to be found. These organisms are not quite as large as the bacilli of mouse-septicæmia; they are two or three times longer than broad; sometimes larger specimens are found, especially in pure cultures. After much difficulty and many failures in the production of cultures—for these organisms could not be grown on the ordinary culture media—Pfeiffer discovered that blood is necessary for the growth of the bacilli. Sterile blood was dropped on the surface of slanting agar tubes and a drop of influenza sputum mixed with the blood. The organisms grew luxuriantly. In this way pure cultures have been obtained in abundance. Pfeiffer determined afterwards that the hemoglobin of the red corpuscles is the substance which is necessary for their growth.

The growth of the influenza bacillus on blood agar is very characteristic. Cultures of twenty-four hours' growth show very small colonies of light, transparent drops, which have a tendency to flow together only when many colonies lie in immediate contact. The influenza bacillus is aerobic, growing only in the presence of oxygen, and best at a temperature of 38° C.; at 43° C. its growth ceases, and at a temperature of 28° C. it grows badly. In drinking water the organisms die rapidly. They are also very susceptible to the process of drying, which destroys them quickly. In the sputum of none but influenza patients could this organism be discovered. The bacilli were also found in all cases in the lungs of patients dying from this disease. Inasmuch as animals, as a rule, are immune to influenza, another difficulty arose in fulfilling the condition of inoculation. Mice, rats, guinea-pigs, rabbits, pigs, cats, and dogs were experimented on in turn, but none of these animals were found by Pfeiffer to be susceptible to this disease. To monkeys only could he transmit the disease. Injections of cultures into the lungs, through the chest wall, as well as inoculations upon the mucous membrane of the nose of these animals, produced attacks of the influenza. From these experiments of Pfeiffer the causal relation of the influenza bacillus to the disease must be admitted, the three postulates of Koch have been fulfilled:

1. The influenza bacillus is to be found in all cases of influenza.

2. The organism cannot be found except in this disease.

3. With pure cultures the disease can be produced in susceptible animals (monkeys).

In conclusion it is interesting to note that Pfeiffer has isolated a form of pseude-influenza bacillus which he has found in three cases in the broncho-pneumonia

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of diphtheritic children, and which, like the influenza bacillus, grows in cultures upon blood agar. A differential diagnosis is easily made through the difference in growths of the two organisms.

Successful Unilateral Laryngectomy for Carcinoma.—Monks (*Annals of Surgery*) has reported the case of a photographer, thirty nine years old, who had been hoarse for about a year and presented thickening and redness of the right vocal band, with decided limitation of movement during respiration and phonation. The man otherwise appeared quite well and strong. There had never been much marked pain in the throat or difficulty in swallowing, and there was no cachexia; neither was there a family history of carcinoma. The growth was apparently confined to one side of the larynx and no enlargement of the cervical glands could be detected. Other measures failing to afford relief, operation was deemed justifiable. Accordingly, a vertical incision was made in the median line, from the hyoid bone to about an inch and a half below the cricoid cartilage; and at right angles to the first, a second incision, upon the right side of the neck, at about the level of the lower border of the thyroid cartilage. After the thyroid and cricoid cartilages on the right side had been laid bare the adjacent right half of the back of the cricoid was separated from the anterior wall of the esophagus, so that after the operation was finished the esophageal wall might be left intact as high as possible, and the liability to regurgitation of food diminished. The trachea was opened at the lowest part of the wound, just below the cricoid cartilage, and a large-sized silver tracheotomy-tube inserted. The whole larynx was then split in front, in the median line, and the two halves held apart while gauze was packed firmly into the lowest part of the cavity upon the tracheotomy-tube. The entire right half of the larynx was now removed, the incisions beginning from below. The right half of the trachea was first divided just below the cricoid cartilage; then, with the knife, within the larynx, the posterior part of the cricoid cartilage was split vertically in the median line. The thyroid cartilage was next carefully separated from its attachments to the soft parts behind and the thyrohyoid membrane was divided. Lastly, the superior cornu of the thyroid cartilage was pulled down and excised. In this way the entire right half of the larynx was removed, including one half of the thyroid and cricoid cartilages, the crico-thyroid membrane, the right arytenoid cartilage, the right vocal band and other soft parts. As much as possible of the epiglottis was permitted to remain. A portion of the growth, which had extended across the median line in front, was additionally removed. Through the upper part of the wound, which communicated with the pharynx and esophagus, a large-sized soft rubber stomach tube was introduced well down into the esophagus. Around the tube iodoform-gauze was packed and the edges of skin approximated by silk sutures. Histologic examination of the specimen disclosed the structure of epithelioma. After the lapse of twenty-four hours a catheter was substituted for the stomach-tube in the esophagus, liquid nourishment being thus administered. A glass tube, surrounded by an inflated rubber jacket, was likewise substituted for the silver tube in the trachea. This was removed permanently on the fifth day. On the ninth day bits of beefsteak were chewed and swallowed with evident relish, but the catheter was continued for liquids. On the tenth day the patient sat up in a chair for a while, and was able to speak in a whisper by closing the opening in the neck. Subsequently, as the opening manifested a tendency to close an ordinary tube was placed in the tracheal wound. Soon after leaving the hospital the patient was able to swallow liquids without the presence of the tube and without regurgitation, by exercising slight pressure upon the opening in the esophagus. The patient was well a year after the operation and engaged in his previous occupation. The tube was worn constantly, being held in place by tapes, and its outer opening closed by a cork.

Fatty Embolism of the Lung in Consequence of Subcutaneous Injections of Creasoted Oil.—Drs. Troisfontaines and Philippe (*Semaine Medicale*), say that the treatment of pulmonary tuberculosis by intraparenchymatous injections, though favorably regarded, gives, at times, rise to quite serious accidents.

The authors observed two cases of pulmonary œdema in patients subjected to these injections, and they believe that this œdema was caused by the direct penetration of oil into a vein, and hence into the cappillaries of the lung. When the oil is introduced into the vena porta, and not directly into the general circulation, the liver will retain and gradually absorb it.

One of the patients, 30 years old, was given, for seven weeks, two injections of creasoted oil nearly every day; (2 grammes [30 min.] of creasote, to 3 grammes [45 min.] of sweet almond oil). These injections were made slowly, with a syringe holding 5 ccm., deep into the gluteal regions.

The injection had, one day, scarcely been made, when the patient complained of an unusual taste of creasote, and began to cough distressingly and incessantly. Respiration soon became much embarrassed; the patient was seized, after fifteen minutes, with extreme orthopnea, panting for air, and speaking with great difficulty and irregularity. The situation became critical, and death seemed imminent for 5—6 hours. The patient recovered his previous condition only after several days, having been treated with repeated injections of camphorated ether, caffeine and sparteine, continuous inhalations of oxygen, application of dry cups and mustard plaster.

Their second patient, afflicted with anal fistulæ and double pulmonary tuberculosis, was subjected to creasote enemata and daily injections of 2 cc. of creasoted oil. This patient also felt, one day, an abnormal taste

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of creasote; he began to cough badly and to expectorate frothy and bloody mucus. Shortly after, symptoms of pulmonary œdema appeared. Cyanosis and cold sweat, the pulse falling to 60. The patient failed to respond to ether injections, and asphyxia increased every moment Bleeding to the extent of about 150 grammes [5 fl. oz] was only of momentary effect, and the patient succumbed two hours after the injection. Autopsy showed that the right lung was the seat of an excessive œdema, the left only very slightly affected.

Oily injections had undoubtedly caused fatty embolism in these two cases.

The needle should always be introduced separately; it should, if there be a flow of blood, be withdrawn, and the puncture made at some other point. It is necessary besides, to inject the fluid slowly and to stop whenever the patient experiences the taste of creasote too rapidly. The authors adhere, in intraparenchymatous oily injections into the lung, to the use of the ordinary syringe, and to concentrated solutions of creasote.

Vaginal Enucleation of Uterine Myoma.—Dr. R. Chobak (*Centb. f. Gyn.*) gives an extensive description of the methods of vaginal enucleation of myoma, which he followed in 43 cases, with one death from hemorrhage: Enucleation is applicable especially in myomas of the portio and cervix, growths in the body which have a tendency to grow towards the cavity, provided the uterus is movable and can be drawn down. The absolute size of the tumor and absolute dilatation of the cervical canal are not of consequence, but it is important that there should exist a certain proportion between the size of the tumor and the dilatability of the canal. A long and rigid cervix renders the operation extremely difficult, but if it is dilatable to a certain extent, the operation can be completed. The operation varies considerably according to the size and seat of the growth, but accessibility to it must be gained by stretching and incising the cervix and vagina. Following the enucleation the uterus should be mopped out with antiseptics, but the attempt to remove the residua of the capsule is to be avoided, for these are best left to themselves. All cavities, and afterwards that of the uterus, are to be filled with iodoform-gauze. All tears and incisions should be carefully stitched. The after-treatment is exceedingly simple. Ergot is given to contract the uterus, and on the fourth or fifth day the gauze is removed. It is only when there is an elevation of the temperature that it is removed before this, and the uterine cavity is energetically irrigated with antiseptics. Even suppurating growth can be treated in this way, and sepsis and pyemia can be kept in the back ground by carrying out twice daily irrigations, following each with the introduction of fresh iodoform-gauze. In the presence of severe hemorrhage or in very anemic persons the packing is done with iodoform and tannin gauze, but care must be taken that drainage of the secretions is not interfered with.

MEDICAL SOCIETIES

When Shall We Remove the Vermiform Appendix?—Dr. James M. Barton, of Philadelphia, presented a paper on this subject before the American Surgical Association. Surgeons still differ on this subject, but they are probably removing the appendix less frequently than formerly. The author had been less fortunate in those cases where he had removed the appendix, so that now in those cases where there is a circumscribed abscess with no general peritonitis and no symptoms of intestinal obstruction, he does not search for or remove the appendix. In nine cases of abscess of the vermiform appendix operated on last year, and when the appendix was not removed, all recovered. In this class of cases portions of the appendix have already sloughed away and the opening into the bowel is firmly closed, and there is little danger of feces making its exit through the appendix.

By not searching for the appendix, the time of operation is much lessened and the loss of blood is nos so great. The drainage tube and gauze keep their places better when the walls of the abscess cavity are unbroken.

The two most fatal complications after operation are septic peritonitis and obstruction of the bowels. There is ofcourse less danger of peritonitis if the adhesions are not broken down. When there is obstruction, if the obstructing portion of the bowel can be identified, it should be liberated. If it can not be, after the abscess cavity has been disinfected, all adhesions should be separated. In this case the appendix should be removed. If there is no obstruction and the adhesions are separated, they may unite in such a way as to cause obstruction.

The following conclusions were presented:

1. An unruptured appendix, distended and discolored should be removed.

2. When rupture of the appendix into the general peritoneal cavity has occurred, the appendix should be removed and the abdomen flushed.

3. When a localized abscess that has existed for some days or weeks has ruptured into the general peritoneal cavity, the appendix should be removed and the abdomen flushed.

4. When adhesions to the abdominal wall have formed, open the abscess and drain, being careful not to break the adhesions that separate the abscess cavity from the general peritoneal cavity. The appendix should not be searched for nor removed.

5. When symptoms of obstruction are present empty the abscess, with the general peritoneal cavity well protected with gauze; disinfect the abscess cavity, then examine for the adhesion causing the obstruction, and if able to identify it, separate those adhesions only. If it can not be identified then separate all adhesions and remove the appendix.

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When abscess has formed and there is no general peritonitis or symptoms of obstruction open the abdomen, protect the general peritoneal cavity with gauze. Then open the abscess and drain; do not search for or remove the appendix.

The Present Position of the Surgery of the Prostate.—Dr. J. William White, of Philadelphia, Pa., read a paper on this subject before the American Surgical Association. In regard to the nature of the prostatic enlargement it was held that the prostate gland was a part of the sexual apparatus and not chiefly an accessory organ of micturition, and that the growth or growths which make up the enlargement are analogous to the fibro-myomata so frequently found in the uterus.

The changes in the bladder are due to the mechanical obstruction, the circulatory disturbance produced by pressure on the prostatic veins and to septic infection.

The symptoms of prostatic enlargement were discussed at length. In regard to treatment, purely expectant treatment is proper only where the enlargement has produced no symptoms and catheterization is easy and shows no residual urine. Ergot is the only drug that offers any prospect of usefulness, but it is as far from demonstrated that it has any destined effect. Palliative treatment consisting in the systematic use of steel sounds for dilatation and the employment of the catheter is of great value in a large number of cases.

The following operative method discussed:

1. Overstretching of the prostatic urethra. This is not likely to be followed by good results in cases where the median lobe and the vesical neck are chiefly involved. In lateral hypertrophy where the urethra is simply narrowed it may be of use.

2. Perineal prostatotomy should be regarded as that of choice in cases in which with marked diminution of the expulsive force, and with cystitis there are evidences of widespread degenerative disease or of distinct renal disease, toxemia and general feebleness.

3. Perineal prostatectomy, where the growth can be reached by the finger and is of small size or pedunculated perineal prostatotomy can always be converted into a prostatectomy.

4. Suprapubic prostatectomy is the operation to be preferred in those cases in which palliative treatment having failed there are unmistakable indications that the local conditions are worse, the general health remaining unaffected.

In conclusion, the speaker said that some time ago the thought occurred to him that possibly if the analogy between uterine fibro-myomata and prostatic growth was a real one, castration might have the same effect upon the latter that oophorectomy does upon the former. At this time he had not read of the alleged prostatic hypertrophy in eunuchs, geldings, etc. He instituted a series of experiments on dogs to determine the effect of castration on the size of the prostate. It was found that the average weight of the prostate in dogs was 35 3 grams. The dogs were killed at varying intervals after the operation, the longest period being seventy-two days, and in all there was a marked diminution in the weight of the prostate, the gland varying in weight from 2.5 grams to 5.5 grams according to the weight of the animal and the period at which it was killed.

The author did not wish to be understood as advocating the measures which these studies would indicate. He simply presented the subject as a line of thought which had occupied his mind at odd times in order to have the criticism of the Association. As regards the employment of castration as a therapeutic measure in prostatic hypertrophy, the final answer must be left with the patient. If the time comes when we can promise equivalent results to those obtained by oophorectomy in uterine fibroids, there will probably be no lack of cases willing to submit to the operation.

Knots in the Umbilical Cord.—Dr. Edward B. Weston read a paper on this subject before the Gynecological Society of Chicago (*Amer. Jour. Obst.*): Very little is said in the text books about knots of the umbilical cord. There is little to be said. They occur rarely, and few of them are drawn tightly enough to arrest the circulation. They are obstetrical curiosities. Nothing can be done to prevent their formation; and if we knew one had formed, of course our knowledge would be of slight value to the patient.

I have two fatal cases to report. Each occurred in the last month of a first pregnancy. In the first case the woman stooped to lift some heavy object, and, as she lifted, felt an unusual commotion in her abdomen, but no movements of the child afterward. Until this day the movements had been as in a normal pregnancy. When the child was born, about two weeks later, there was a single, tightly drawn knot in the cord which completely arrested the umbilical circulation. The condition of the child indicated it had been dead two or three weeks.

In the second case the woman became sick at the stomach while in bed at night. Her husband gave her a bowl, and, sitting up, she leaned forward and vomited. She said something felt as if it turned around in her, and gradually all fetal movements, which had been unusually strong, ceased. When labor began I was sent for, and, after examining the patient, told the husband that I believed his wife was pregnant with twins and that they were dead. The diagnosis proved correct. One child had passed through a loop in its cord and tied a single knot so tightly around the other cord that circulation was interrupted and both children killed. Delivery in this case took place at about the expected time, and the condition of the children indicated that they had been dead two or three weeks.

Dr. Weston, in closing the discussion, said: If I were to make any reply to Dr. Jaggard's criticism it would be hardly more than to re-read the report of the cases. There was no other discoverable cause for the

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death of the children, and the one given was perfectly sufficient. The mothers and fathers were healthy, the children of average size, and pregnancy had in each case been a normal one up to the time of the accident, which, without doubt, was the cause of death.

Ulceration of the Mouth, of Tabetic Origin.—At a recent meeting of the Paris Society for Dermatology and Syphilography, Hudelo (*Internat. klin. Rundschau*) demonstrated a tabetic who presented two areas of ulceration of the mouth corresponding with the left inferior maxillary nerve and the right superior maxillary nerve. The affection had set in a year previously, and began with a painless loss of the teeth, after which the ulcers formed. There was nothing in the family history to explain the occurrence; there was also no history of phosphorus-poisoning; and, although the man had had syphilis, the ulcers did not present the appearances or pursue the course of syphilitic lesions. The ulceration was considered as related to the posterior sclerosis and to be dependent upon an inflammation of cranial nerves. The skin of the face and the mucous membrane of the mouth were anesthetic.

The Treatment of Cholera with Atropine.—At a recent meeting of the Royal Medical and Chirurgical Society of London, Dr. Lander Brunton (N. Y. *Med. Jour.*) stated that in 1873 he had called attention to the close resemblance between the symptoms of cholera and those of muscarine poisoning; and, as the latter could be relieved by the subcutaneous injection of atropine, had suggested that good results might be hoped for in cholera from administering atropine. He had not had an opportunity of acting on his theory until last year, when the atropine had proved very useful in treating two cases of cholera. It seems singular that one so well informed as Dr. Brunton should apparently be unaware that this suggestion had been made and successfully carried out years before he made it. We need not refer to the facts that Viardin in 1832 and Chalvet in 1859, successfully employed belladonna in the treatment of cholera. But in 1866 the late Dr. John T. Hodgen, of St. Louis, published an article advocating the administration of atropine to relieve the collapse of cholera, and for years afterward in his lectures he referred to the usefulness of this drug. In the cholera epidemic of 1873 a number of American physicians employed atropine in treating cholera.

Attempted Bloodless Operation for Malignant Polypus Springing From the Base of the Skull.—Dr. Roswell Park, of Buffalo, read a paper on this subject before the American Surgical Association. The case was one of rapidly growing malignant tumor completely filling the pharynx, in which operation was attempted at the patient's request. In order to lessen danger from hemorrhage, he adopted the method suggested by Senn of isolating the trachea and passing a rubber tourniquet around the balance of the neck. While there was no arterial hemorrhage, there was excessive venous bleeding. The jaw was resected and the malignant material removed. During the operation respiration ceased and efforts at restoration were required for forty-five minutes before the operation could be completed. The patient left the table in apparently good condition, but died the next morning from shock, there having been no bleeding.

The Importance to the Surgeon of the Bacillus Coli Communis.—Dr. Roswell Park read a paper on this subject before the American Surgical Association. The literature relating to the colon bacillus was thoroughly reviewed and evidence presented showing that this organism which is constantly present in the intestinal canal is not always a harmless inhabitant, but becomes at times an active invader, and does not confine itself to the intestinal mucosa where it may set up most active desquamative lesions, but may pass this barrier and penetrate into the general circulation and exercise pernicious activity in numerous other organs and toxic effects upon the system at large.

Herniary cholera so called, is due to intoxication from the products furnished by the organisms in a virulent condition. From the intestinal canal the colon bacillus may ascend along the biliary passage determining lesions in the gall bladder or liver. It is known to be one of the frequent factors in peritonitis of intestinal origin. In the kidneys as well as in the badder the colon bacillus may exert pathogenic and pyogenic properties. The organisms may be introduced from without as upon a catheter or may be transferred from their normal habitat by some traumatism of the natural channels. The endocardium, the meninges, the pleura, articular serous membranes and the lungs are at times not exempt from manifestation of its activity. It is probable that there is a form of post operative septicemia due in no direct way to the operator or operation, but is in fact what it has often been called, an entero sepsis, and due to the migration from the intestinal canal of the colon bacillus. Constant attention to the intestinal canal should therefore be the watchword of the surgeon both before and after operation.

The author reported six cases from his own practice in which the colon bacillus was found, and in some instances it was the only organism present. The cases were as follows:

1. Cancer of intestine with abscess.
2. Recurrent peri-appendical abscess.
3. Acute abscess of the liver.
4. Gangrenous appendicitis.
5. Acute appendicitis, with perforation and obstruction of the bowels.
9. Cholecystitis suppurativa.

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NOTES AND ITEMS

The Decline of Scarlet Fever.—The medical profession on each side of the Atlantic has been interested to observe a diminished mortality and sickness rate of scarlet fever (N. Y. *Med. Jour.*). Our English brethren are already engaged in inquiries as to the causes of this decline. The *Medical Press and Circular* for April 29 takes up the subject by comparing the mortality in England in 1881, when 14,275 deaths from that disease were registered, with that for 1891, when 4,956 was the total. The Registrar General's Report for 1891 pointed out the fact that the scarlatinal mortality had not reached so low an ebb since the laws of registration went into operation. This is true not only when taken proportionally to the population of the county, but absolutely. During the seven years ending in 1891 the deaths never reached 8,000 in any one year, and the average annual total was only 6,458, while in no previous year, except 1884, had there been fewer than 11,000 deaths from this cause. Dr. William Ogle, the medical head of the General Registration Office, has been greatly impressed by watching "this large and long-sustained diminution in the mortality from scarlet fever as one of the most curious facts in our death statistics, and as yet without adequate explanation."

According to Dr. Ogle, there are three probable influences that have contributed toward the result, but neither he nor the readers of his report can accept them as sufficient causes. In the first place, he finds that the birth-rate of England shows a material decline in the last decade, in consequence of which the proportion of children to the population—that is, the proportion of individuals most liable to suffer from scarlet fever—had undergone a marked reduction; but this can be numerically estimated on the bases of high and low birth-rates, and it will be found that a reduction of seven percent only in deaths by scarlet fever can thus be accounted for.

In the second place, there has been a number of sanitary undertakings at work in the direction of a reduced scarlet fever mortality, not the least of which has been a growing enforcement of isolation of the sick in the infectious disease hospitals. For example, in and about London, more than half the deaths from this cause now take place within the wards of the fever hospitals, whereas in 1878 not more than seven per cent of such deaths occurred in hospitals.

Thirdly, the scarlet fever of to-day is of a milder type than that of ten years ago. The evidence to corroborate this view is obtainable from the Registrar's statistics in the fever hospitals; from 1874 to 1878 the average mortality in every hundred patients in those hospitals was 12.88, while in the years from 1887 to 1891 it was 8.56. This harmonizes with the generally expressed experience of the profession that there is a diminished virulence in scarlet fever. This renders plausible the proposition of those who believe that scarlet fever has been passing through a modification of type, just how it is caused and how much further it may be expected to extend remains to be explained. Whether the disease has reached the end of its tether, as was the case with leprosy in England and France in the fifteenth century, or is simply acting in alternation with epidemic influenza, as some think, is a question not easy to solve in our present knowledge of epidemiology. Dr. Ogle's opinion is that epidemics of scarlet fever will not soon, if ever, again be the scourge to infant life that they have been. This hopeful view is based on the knowledge that he has, as an official, that the public health laws have been administered with a growing efficiency, and that the best results are now being felt from processes of sanitation, such as drainage, water-supply, and the like, that require years for their building up and years for their full fruition. In proof that sanitation is at work in this beneficent way, there is adduced the fact that the mortality from typhoid fever is, almost year by year, showing great reduction. The lowest death-rate from that cause ever shown for England was that of 1891, and the same seems to be the case with reference to typhus fever and simple (or non-defined) fever, during the same period.

Concerning Mercurial Treatment.—Dr. Charles Mauriac (*Revue gen. de Clinique et de Therapeutique*) believes that this remedy, in common with others which at the same time are poisonous and are of therapeutic value, must be so used that the different degrees of curative action shall be exhibited according to the circumstances of each case, and yet toxic effects, which may be even antagonistic to its therapeutic action may be avoided. The curative principle of the remedy does not change, it matters not by what means it is introduced into the system, nor indeed in what form; the question of dose is important, and the differences in results arise only from the rapidity with which the system can be mercurialized. The rapidity of the curative action does not imply that it shall be of long duration, or that it may have some preventive power, if it is slow and gradual. On the contrary, when a syphilitic is attacked by erysipelas, or by pneumonia, or by typhoid fever, the rapidity of the disappearance of the symptoms is frequently marvellous. In commencing treatment it is proper to place the patient upon a diet which shall aid the absorption of the remedy, and to limit to some extent the nutritive functions. From time to time purgation is proper; to supervise the diet limiting it in quantity, choosing it according to the temperament of each individual. In a considerable number of patients, especially in women, the question of tonics, reconstituents, and substantial diet will arise. The mouth and teeth should be attended to before treatment is commenced, and the digestive functions carefully examined. Above all things the renal functions should be carefully attended to, for it is by these

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organs that the remedy is eliminated. In all cases the treatment must be adapted to the individual, and the particular condition of that individual at different times.

Dr. E. O. Shakespeare has assumed editorial charge of the department of Hygiene and Preventive Medicine of the *Dietetic and Hygienic Gazette.*

Orificial Surgery.—The next annual class for instruction in orificial surgery will assemble in Chicago on the morning of September 4. It will have a four hours' daily session during the week. For particulars address, Dr. E. H. Pratt, R. 56, Central Music Hall, Chicago.

Sodium Phosphate for Trigeminal Neuralgia.—In a rebellious case of trigeminal neuralgia, in which all of the usual therapeutic resources had been exhausted without affording relief, Glovieux, of Brussels, tentatively practiced subcutaneous injections of sodium phosphate, and with admirable results. The patient, who had suffered for two years, was completely relieved. Ten other cases of trigeminal neuralgia were treated similarly, with success in seven. A solution of thirty grains of sodium phosphate in three ounces of distilled cherry-laurel water was prepared, and of this from fifteen to forty five minims were injected daily.—*La Semaine Med.*

Influence of Faradism Upon Irritability of Muscle and Nerve.—From a study of the behavior of muscles and nerves to the stimulus of the faradic current, Mann (*Deutsche Archiv fur. Klin. Medicin*) has found that the application for several minutes to a muscle or nerve of very weak currents, whose intensity is lowered below the minimum necessary to induce contraction, is followed by no change in faradic irritability. Stronger currents that induce muscular contraction cause diminution of irritability in a degree in direct ratio to the intensity of the current and the duration of its application, it matters not whether the muscle be stimulated directly or through its nerve. Faradization repeated regularly for several days gives rise to an increase in the irritability of the faradized muscle or nerve.

Medicine and Art.—It seems worthy of comment that among the thousands of pictures at the Columbian Exposition, illustrative of the art and customs and types of every country and calling of the world, there are not half-a-dozen pertaining to medicine The query arises, is this because of any inherent qualities of medtcal ideals and practices that do not lend themselves to esthetic treatmeut? Every aspect of life, death, suffering, and wrong that the world has known is portrayed by the painter or sculptor, all save the one aspect of illness and the medical saving of life. The heroism of the men who kill is found pleasing, but not the heroism of those who bring life out of death. Perhaps this illogicality rests upon the larger one of the contemptuous and contemptible opinion of medicine in the minds of the world. Inexplicably, unconsciously, but so inevitably, the worldling rates the great physician immeasurably below the great general, statesman, or lawyer, and with the large majority there even arises a tinge or a downright dyeing of disrespect, when medicine comes into thought. As to the pictures again the impracticability of the art-treatment of medical subjects is sadly illustrated by the examples at Chicago. Seligman's "Billroth's Clinic" is well known to many through a cheap reproduction. Lessing's "The Sick Bed," and Jimenez's "Salle d'hopital, are hardly worth passing notice, and the treatrical clap trap of Heyl's "Before the Section" (*sic*) is wholly execrable. All are simply prosaic recitals, none being touched with the divine fire of art. Are such things necessities or misfortunes—errors of the artist or inherent in the subject?

Aspidospermine.—Dr. G. Bordet (*Les Nouveaux Remedes*) states that the aspidospermine of commerce is a mixture of several products derived from the quebracho aspidosperma, but it possesses practically the properties, excepting the antithermic, which is stronger than the contained quebrachine, of the pure alkaloid. It increases the depth and amplitude of the respiratory movements, slows the heart, and lowers the temperature. Huchard has recommended this drug in dyspnea of functional origin. The dose is from one to two grains, which is soluble in water, with the addition of a few drops of a ten per cent solution of sulphuric acid, which however, should be neutralized by bicarbonate of soda, if it is intended for hypodermatic use.

Nocturnal Laryngeal Spasm in an Adult. Herschell (*Lancet*) has reported the case of a literary man, thirty-six years old, of markedly neurasthenic temperament, who for eighteen months had suffered from attacks of spasm of the larynx at night. At first these occurred about twice a week, on some nights two attacks taking place. Under appropriate treatment the attacks ceased for a time, but returned upon relaxation of hygienic measures. The attacks usually occurred after late dinners and over indulgence in cigars. They set in about two o'clock in the morning, when the man is awakened with a sense of suffocation, from spasm of the larynx, which prevents inspiration. This continues for a few seconds, when the spasm partially relaxes and air is drawn into the larynx with a crowing sound. After nearly a minute the spasm entirely relaxes, but the larynx feels sore and uncomfortable for an hour or two. During the attack the heart beats violently, while afterward the stomach is found tympanitic and distended. Eructation of gas is followed by relief and brings the attack to an end. Often there appears a spasmodic condition of the orifices of the stomach, which prevents the expulsion of the flatus upward or downward. There was no evidence of disease of the heart, vessels or nervous system.

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American Electro-Therapeutic Association.—The third annual meeting of the American Electro-Therapeutic Association will be held in Chicago, September 12, 13 and 14, at Apollo Hall, Central Music Hall Block. Members of the medical profession interested in electro-therapeutics are cordially invited to attend. Augustin H. Goelet, M.D., President; Margaret A. Cleaves, M.D., Secretary.

Parotiditis Complicated by Orchitis, Prostatitis, and Hemoptysis.—Comby (*L'Union Medicale*) has reported the case of a gardener, twenty-nine years eld, who, after having worked all day in a hot house, was seized at night with a chill; the right testicle was noted to be swollen, red, heavy, and painful. During the night there occurred sweats, with headache, pain in the back and in the extremities, so that sleep was prevented. There was also evidence of the existence of a mild prostatitis. On the following day delirium set in, and a day later still painful swelling appeared in both parotid regions. There were fever and dyspnea, and in the midst of a paroxysm of coughing, profuse hemoptysis occurred. Improvement now soon set in, and in a short time the man was convalescent. Examination of the chest failed to disclose evidence of organic disease; neither did the urine present any abnormality. The treatment employed consisted in the administration of quinine sulphate, purgation, the application of emollient compresses to the testicle, and a milk diet.

Poisoning with Turpentine.—Carveth (*Canadian Practitioner*) has reported the case of a woman who at bedtime, took about half an ounce of old spirit of turpentine mixed with an ounce of whishey, in mistake for castor oil. The mistake was only noticed after the turpentine had been swallowed, but nothing was done at the time except to take a dose of castor oil. The patient shortly afterward fell asleep, but was awakened in the course of five hours with sickness of stomach. A little later she vomited, and after the lapse of several hours more she had a convulsion, followed by loss of consciousness. The pulse was weak, feeble, rapid; the face and lips pale; the patient restless, at times delirious and talking incoherently, but capable of being partly roused. Urine had been passed in generous quantity. Whiskey, spirit of nitrous ether, milk, and sweet oil were given, and warmth was applied to the body. Vomiting was induced by irritating the fauces The vomited matters had a strong odor of turpentine ten hours after the fluid had been taken. After free vomiting, consciousness was regained and complaint was made of a burning pain in the right leg. Examination disclosed the presence upon the posterior aspect of the knee of a blister 5 by 12 inches in extent, the contents of which were watery and emitted an odor of turpentine. Gangrene of the superficial parts took place in this area, and fifteen weeks elapsed before the resulting ulcer healed.

RAILROAD : NEWS

Special Railroad Rates for the First Pan-American Medical Congress to be held at Washington, D. C, September 5th to 8th Inclusive.—The Chesapeake & Ohio Railway, from Cincinnati or Louisville to Washington, D. C., is the quickest, most picturesque, interesting and comfortable line between those cities. Their trains are vestibuled throughout, lighted by electricity and carry the latest pattern of through first class coaches, Dining-Cars and Sleepers.

The scenery along the upper Ohio and Kanawha Rivers, through the gorgeous and canons of the New River, among the Peaks and Valleys of the Blue Ridge and Alleghaney Ranges and over the fertile plains and historic battle fields of Virginia constitutes a kaledioscopic panorama that for variety, beauty, grandeur and historic interest is unequaled in this country.

Ths rates of fare will be the same by all of the lines and while they have not been agreed upon, they will positively not be more than one and one-third fare for the round trip. The one way rates ars as follows from St. Louis $19.25, Chicago $17.50, Cincinnati $14.00, Indianapolis $16.00, Louisville $16.00.

Tickets will be sold at those places September 1 to 4, inclusive, good to return leaving Washington as late as September 12. Ask for your tickets "via the Chesapeake & Ohio Railway.

If you will advise me what day you will leave any of the places named and whether in the morning or evening and how many berths you will want I will reserve them through to Washington for you.

Write for a copy of "Virginia in Black and White."

E. B. Pope,
Western Passenger Agent, C & O. Ry., St. Louis.

The Following Resolutions were passed at the last meeting of the St. Louis Board of Health:

Whereas, In view of the indefiniteness and insufficieney of official information as to who have been appointed consultants to the different hospitals under city control and are now holding such positions, the terms of such appointments and the duties and obligations toward the city of those holding them, it is desirable that a clearer understanding in this regard be had and some definite rule be followed in future; therefore be it

Resolved, That the Board of Health hereby reconsiders its action in this respect and vacates and annuls all existing appointments of this kind. And be it further

Resolved, That the proper committee be instructed to prepare and submit to the Board a rule or plan to govern all such appointments in future.

The foregoing preamble and resolutions were adopted by the Board of Health on July 20 last, the object being to formulate a systematic plan by which appointments to the various institutions may be made in future.

Dr. Otto E. Forster.

MEDICAL REVIEW.

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ORIGINAL ARTICLES

A Rational Treatment of Prostatic Obstruction in Old men.

BY G. WILEY BROOME, M.D., OF ST. LOUIS,

Professor of Surgery and Clinical Surgery, Woman's Medical College, St. Louis; Surgeon to the Woman's Hospital; Consulting Surgeon to the St. Louis City and Female Hospitals, etc.

Read before the Missouri State Medical Association at Sedalia, May, 1893.

If we contemplate the teachings of the "American Textbook of Surgery", together with the more recent contributions from the same author, who (it is presumed) wrote the chapter upon the Diseases of the Prostate Gland, as reflecting the concensus of the opinions of the American Surgeons upon the methods of treatment in prostatic hypertrophy, as inculcated by him, then we must conclude that Prostatectomy alone is the only plan of treatment that holds out any hope for the relief of these suffering with this distressing affliction.

This teaching, coming from such high authority, brings with it the conviction that it is sanctioned and endorsed by the distinguished members whose names appear on the title page of that great work, is of itself sufficient to exert a powerful influence in favor of this method. Indeed, it has already manifested itself, for the tendency seems to be wholly in favor of some one or other method of Prostatectomy. If we turn to the chapter of the American Text-Book of Surgery, in which the subject of Prostatic Obstruction is treated, we will find the discussion of the subject in the followiug terms:

"The results of experience thus far seem to show that the operation of Prostatectomy is justifiable in most cases of hypertrophied prostate in which catheterism is difficult or impossible or excessively painful and in which a high grade of cystitis has developed and septicemia or uremia is imminent. The prognosis is unfavorable in proportion to the duration of the obstructive symptoms and the size of the mass which it is necessary to remove to secure patency of the urethra, and is of course much influenced by the condition of the kidneys." No other treatment is recommended than that of Prostatectomy as you see, save systematic catheterism, and this only as long as it can be endured by the patient.

In the light of a careful study of the subject, I am strongly impressed with the conviction that this teaching is wrong, and that Prostatectomy is not the best that may be done for the patients. That in fact all teaching that would have us attack the prostate gland by a cutting operation as the only remedy for the cure of the patients is defective, whether it adopts the method of Tobin, Mercier, Bottini, Harrison, Dittell, McGill, Belfield, Treves, Whitehead, Dolbeau's perineo-prostatic dilator, or any like plan of operative procedure.

I am also led to believe that McGuire's method of drainage, although a more palliative and rational management of these cases, is defective and exceedingly unsatisfactory in many essential particulars.

It was Sir Henry Thompson who first struck the keynote to the principle underlying the rational treatment of prostatic obstruction, when he suggested the permanent supra-pubic drainage, and at the same time pronounced the dictum that a confirmed atony of the bladder, consequent upon prostatic enlargement, is incurable even by the removal of the obstruction. He contended himself with the treatment by drainage, the wound being fitted with an apparatus to conduct the urine into a urinal. This plan I conceive to be the most rational and the best for the patient that can be done. That is a treatment that will remove that source of intolerable suffering which so often renders old age unbearable, and death a happy release, and a method too that does not entail a mutilating operation as Prostatectomy does. I hold that to make such an operation upon a bladder when there are already putrefactive changes going on besides chronic suppurative cystitis is not good surgery. Rest is what the bladder needs, and rest is what the suffering patient is constantly praying for.

The health is already much impaired in these old men, and to be subjected to a severe surgical operation under these circumstances, and that, too, to a particularly painful operative procedure, the outcome of which must necessarily involve serious misgivings as to its ultimate termination. There must remain grave doubt as to the justifiability of any method of treatment that

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does not give the bladder immediate and continuous rest.

Systematic catheterism ought never to be instituted because in the first place, it is a source of an almost unavoidable infection, especially if the patient uses it himself; and secondly, it, too, soon becomes a tantalus and cannot be used so as to drain the bladder perfectly. Sir Henry Thompson asserts that habitual catheterism for two years will permanently destroy the power of the bladder to empty itself. McGill, the champion advocate of Prostatectomy in Europe, differs from this conclusion, but adds that it is one of the strongest arguments in favor of early operation, since catheterism, the chief palliative measure, which replaces it, may within two years, so ruin the bladder that it can never recover.

In order to enable you to compare the methods of treatment as taught in the American Text Book of Surgery, etc., by the advocates of Prostatectomy with the methods of treatment by supra pubic drainage, as advocated by Sir Henry Thompson and his followers, it will be necessary to quote at some length from the American Text-Book of Surgery, and the recent contributions from the same sources, and also from the last edition of Sir Henry Thompson's work on Diseases of the Genito-Urinary Organs, the principles of whose plan of treatment, I propose to advocate in this paper. I entertain a confident hope that all who will carefully compare and impartially examine the different methods of treatment will be fully convinced of the superiority of Sir Henry's methods over those of the advocates of Prostatectomy.

In the text-book, the indications, etc, for an operation are given in the following words: "The amount of muscular power remaining in the bladder walls may be roughly estimated by the size and force of the stream of urine which the patient can project, (a) unaided, and (b) through a catheter. If doubt exists as to feebleness of propulsive power is due to obstructive or degenerative causes, the common association of the latter with the evidences of general sclerosis should be remembered and given due weight. Usually, however, catheterism will clear up this doubt by removing the obstructive element and thus demonstrating the degree of vesical atony or rigidity which is present.

2. The quantity of residual urine is important as showing both the amount of obstruction and the capacity of the bladder. If it is large in spite of the presence of good muscular power, it should be regarded as distinctly indicating Prostatectomy.

3. The condition of the urine and the vesical mucous membrane is importrnt. Sterile urine, i. e, absence of infection of the mucosa with pyogentc or saprophytic organisms is a most favorable factor as regards prognosis; but recurring cystitis, especially when it is associated with vesical paresis, either atonic or sclerotic, is an indication for prostatectomy, although it undoubtedly increases the danger of death from sepsis. If with the cystitis there is difficult or painful catheterism, the surgeon finds himself practically forced to operation in spite of these unfavorable circumstances.

4. If the general health is unimpaired and there is no evidence of renal disease, while the local symptoms are pronounced, the case is obviously one of the most favorable for prompt operative interference. Unfortunately the great majority of prostatics are not led to consider operation until long after the break-down in catheter-life has been followed by vesical and renal infection and the superinvention of the general toxemia, a combination of sapremia, septicemia and chronic uremia, which renders them such unfavorable subjects for the surgeon." (That is what we presume he means for Prostatectomy).

In a preceding paragraph of this article, the author refers to the operation and to those who have objected to it in the following terms: "Prostatectomy, in spite of the unfavorable opinions of the operation formed and expressed by Socin, Guyon, and Sir Henry Thompson has steadily gained in the estimation of the profession and is today a well recognized and justifiable surgical procedure applicable to a large number of cases."

"It was in the year 1869", Sir Henry Thompson informs us in his last edition that he "decided to introduce a tube into the bladder of patients suffering severely from prostatic obstruction, above the pubes to be permanently retained there as the constant channel for the urine. Just as a tracheotomy tube may serve some patients for years as the only channel of air into the lungs." He adds further: "Now, instead of giving you any details of the cases in which I have thus operated, as I have sometimes done, I may say in general terms that the result has always been advantageous in a certain degree. It is unquestionably a proceeding capable of mitigating the sufferings of an aged and infirm patient, to whom hourly catheterism is a *slow but fatal form of torture.* In order to be of real service in the way of prolonging life, and rendering it fairly comfortable, the operation should be resorted to at an earlier period than has usually been chosen, certainly at a stage before the last painful manifestations have appeared or have given notice of their approach. But I am about to propose a modification of the preceding which I believe will render it more valuable."

"About three years ago, I performed digital exploration for an advanced case of constant and paiuful catheterism, and removed six encysted calculi, draining the bladder afterwards with great relief to the symptoms; but in about three-fourths of a year I was again consulted, owing to their reappearance. I then decided, instead of making the puncture above the pubes described, to perform the supra-pubic section as for lithotomy, having complete confidence in the safety of the modern operation, so as to enable me to lay open to view and examine every part of the bladder and then let it heal so far as to admit a tube through which in future all the urine should pass. I did so in June 1886, and found the mucous membrane of the bladder coated for the greater part with a dense fibrous deposit,

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often met with in old-standing cases, and firmly adhering thereto much phosphatic grit; this, with considerable trouble, I detached, removing the whole. The wound now rapidly diminished in size, and I was soon able to carry out my intention of enabling the patient to walk out of doors in about a month's time. To the supra-pubic region was fitted a silver plate, with an opening in it, transmitting a silk gum tube, No. 20 English scale, which projected less than an inch on the outer side, and was inclined downwards two or three inches on the inner side, thus conveying from the bladder all the urine as soon as it arrived by the ureter. To the tube on the outer side was attached the ordinary urinal worn by persoes requiring such a convenience and into it all the urine passed without leakage or trouble. After a little adjustment the contrivance answered so well that the patient went abroad and spent the winter there in the enjoyment of health, walking three or four miles daily."

"He has continued thus, with slight occasional troubles, to the present time (autumn 1888), and has not used a catheter since. He removes and cleanses the tube once daily and washes out the small cavity which remains as bladder, for the pelvis is largely occupied by a prostate almost as big as a cocoanut. He has no pain and has long given up the use of morphine, which he formerly consumed in large quantities."

Mr. Buckston Brown's suggestion as to the retention of catheters in restive patients, by means of a lead stillett, only tends to handicap the patient all the more, and thus aggravate the distressing symptoms already existing, although he deprecates Prostatectomy and thinks it a dangerous operation, but unfortunately I may add, admits that it is only necessary in men *already broken in health*, and uncertain even in cases of recovery, of being followed by release from the need of using the catheter.

There can be no doubt but these cases of prostatic obstruction are due to an intra-vesical growth and the severity of the symptoms in a case of hypertrophy of the prostate bears little or no relation to its apparent size as felt in the rectum.

An old man, 74 years of age, called at my office the other day, whose prostate is quite as large as my fist, but the enlargement is almost entirely backward, urinary symptoms only manifesting themselves within the last few days.

McGill classifies the various forms of the intra-vesical growth that produce urinary symptoms into (1) a projecting middle lobe pedunculated or sessile; (2) an overgrowth of the middle lobe and of the two lateral lobes, forming three distinct intra-vesical projections; (3) enlargement of the lateral lobes only; (4) a uniformly collar-like projection encircling the orifice of the urethra.

I have preserved several specimens illustrating a series of cases, as one autopsy occurred after another in old men at the City Hospital of St. Louis. These specimens are not a selected variety, but include a number from the old men who died at that institution during the last few months and on whose bodies post-mortems were made. I have one of these specimens here, and from it and the bladder in which it grew, one can readily imagine how difficult it would be to establish a low-level channel by a cutting operation upon the prostate. McGill, and others who, advocate the practice so strongly, aim at establishing a low-level channel as you are no doubt aware, by the operation of Prostatectomy, which I believe to be wholly impossible without greatly endangering the life of the patient.

If it were possible to remove a portion of the projecting prostate by the suprapubic procedure sufficient to secure a low-level channel and perfect drainage of the floor of the bladder through the urethra, as advocated by McGill, I, notwithstanding, believe the procedure is wholly unjustifiable, and particularly unjustifiable and inhuman if there be the highly irritable conditions that follow cystitis or prolonged catheterism and other like causes. For unless the results of the operation afford the patient complete rest and perfect drainage of the bladder any such operative procedure must necessarily prove a failure. You may readily perceive, that as I cannot endorse the operation of Prostatectomy, not even the more alluring surgical treatment first outlined by McGill, I need to mention the various other operative procedures recommended and practiced for the relief of prostatic obstruction only to dismiss them as inadequate and not worthy of imitation. I wish to state in this connection, however, that if a prostatectomy could ever seem to be justifiable, certainly the urethral route could hardly ever become popular.

As intimated at the outset of this paper, our whole aim should be to secure prompt and permanent rest to the bladder of these unfortunate patients, and not as is added by Mr. E. Hurry Fenwick to also permanently remove the cause of the obstruction.

It is almost wholly impossible by any of the operations heretofore described, besides the failure of those operations to secure complete and prompt physiological rest of the bladder, they all for the time being, at all events, aggravate the already distressing symptoms and may hasten the fatal issue of the cases. In a series of lectures recently delivered and which are conspicuous for their thought and labor, Mr. Mansell Moullin carefully and intelligently reviews the question of operative treatment of the enlarged prostate. In criticising the operations which have been devised for the relief of the complications arising from enlargement of the gland, he very properly propounds the significant inquiry as to whether the operation of prostatectomy does not *involve too great a risk to human life.*

The plan of treatment I have been practicing and the one that has given more satisfaction than any other, I can describe in a few words. I may add right at this point that the class of cases most suitable for the operation are those which have reached the stage of prostatic obstruction at which the American Text Book of Sur-

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gery advocates the introduction of systematic catheterism.

To proceed with the description of the technique of the operation, of course, it must be understood that entourage of the parts has been properly prepared for the incision which is to be made just above the center of the crest of the pubes and continued directly upward for say two and a half inches. This dissection is carried neatly and cleanly down to the bladder wall which is to be exposed longitudinally for at least three-fourths of an inch. If the vesical fold of the peritoneum has been encountered it must receive aseptic protection. The wound is now packed with iodoform gauze, over this is placed a fold of absorbing cotton, and upon this is laid a piece of rubber tissue about the size of the hand, then the whole to be confined by the adjustment of a neatly padded "T" bandage. The bladder is to be kept drained and as quiescent as possible until after the lapse of about forty-eight hours, when the dressings are to be removed together with the gauze tamponade. The walls of the incision wound will then be found to have been closed with granulation tissue and the connective tissue spaces closed in. Two tenacula are now engaged in the muscular wall of the exposed bladder at the margin of the wound upon either side, the handle of the one on the left side of the

patient is passed to an assistant who is to be instructed to maintain throughout steady traction upward and outward. The handle of the other tenaculum is retained in the left hand of the operator; a good sized trochar (this is the one I use and through an opening made by the instrument I was enabled to remove a large calculus from the bladder of the patient) is now thrust through the wall of the bladder midway between the fixed points of the tenacula. We now have a triangular opening into the bladder, with its triangular flaps preserved intact, and directed inwards. The trochar may now be withdrawn and the little or index finger gently insinuated through this opening and the interior of the bladder explored. This exploration is made for the purpose of ascertaining the nature and extent of the cause of the obstruction. When this discovery is satisfactorily established in the mind of the surgeon the finger is withdrawn and the instrument, illustrated, is introduced, while the tenacula are still held securely in position. The granulation tissue will in a little while unite the walls of the wound firmly and securely to the convolutions and the involutions of the thread cut upon this drainage tube. You will now observe the acorn-shaped end of the tube which prevents its escape from the bladder, while on the outer end there is a hard rubber cap which is adjusted upon the screw device and which prevents the tube from dropping wholly into the bladder, and which also protects the outer end from the friction of the clothing of the patient when walking about. In maturely contemplating and reviewing the foregoing remarks, I am convinced that I am almost alone in America in deprecating the operation of prostatectomy. That I am nearly alone in characterizing the procedure as an unjustifiable operation and wholly inimical to the safety and well being of the patients, where the real indications show that suppurative cystitis is present.

I, therefore, inveigh against the operation, because instead of affording the patients rest,, it intensifies their sufferings, and may hasten the fatal termination of life, and consequently must be considered unjustifiable, while other more rational and life preserving measures may be instituted and practiced for the relief of these poor sufferers.

In view of these facts, I consider suprapubic drainage the best treatment that can be given these patients; first, because it entails no hardships on them; and second, because it affords them immediate relief from pain and loss of sleep, the effects of which are rapidly destroying them. Hence, the results of my deliberate convictions relative to the subject matter of the foregoing remarks, I desire to epitomize and emphasize in the following conclusion:

The novel points in the procedure advocated by me consist of first making the longitudinal wound just above the pubes and only deep enough to reach the bladder wall as above described, this constitutes the first step. The second step consists in making of a triangular opening in the bladder by means of a trochar as explained above. The advantages of the opening made by a trochar for the purpose of permanent drainage of the bladder without leakage must be perfectly apparent to all, as the permanent drainage tube has a thread cut into its surface to which the walls of the fistulous tract will become firmly and securely united, thus perfectly preventing leakage while at the same time the bladder will have complete rest by being constantly and uninterruptedly drained. These results could not be attained by means of a longitudinal incision in the bladder, as the walls of the fistulous tract could not become united closely enough, with this or any other drainage tube, to prevent leakage.

A simple look at the accompanying cuts, will establish this fact:

That marked "A" represents the opening made in the bladder by a trochar, the fistulous tract of which will readily unite closely and compactly with the thread cut on the surface of the drainage tube, while

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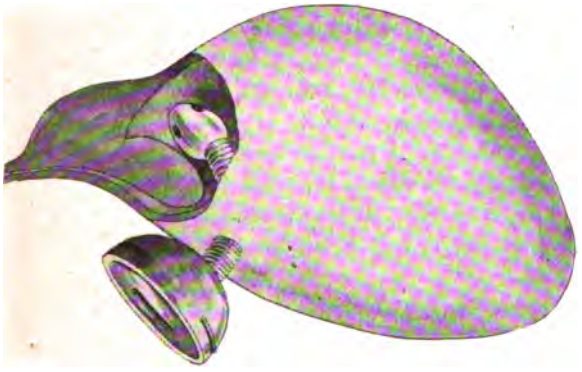
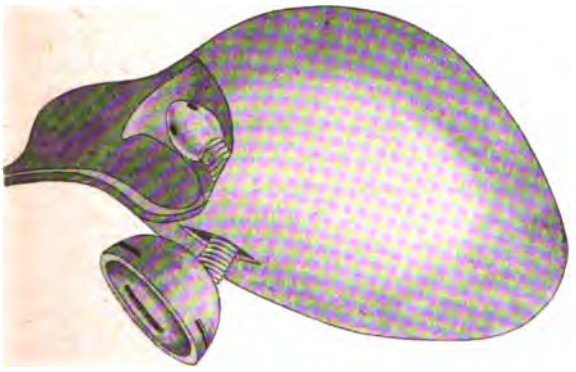
that marked "B" represents an opening into the bladder made by a vertical incision. The latter clearly shows the adaptability of any cylindrical drainage tube to an opening of that kind. The urine will escape through these triangular spaces above and below the drainage tube as fast as it finds its way into the bladder in spite of every attempt to prevent it, and hence the granulation and cicitrization of the track around the tube can never take place while its raw surfaces are constantly exposed to the irritating effects of the urine.



A

I have also supplied this drainage tube with a plunger or piston with a valvular end which is brought into requisition when the patient gets able to walk about, and is worn intact for the purpose of keeping the lumen of the drainage tube free from any incrustation, and also to keep the urine in the bladder until the patient will wish to void it, which he can do simply by withdrawing the plunger which will enable him to evacuate his bladder compleletly and at his pleasure.



B

After wearing this screw drainage tube until the bladder becomes free from all inflammatory and irritating causes the hypertrophied glandular tissue will undergo atrophic changes, as it has done in all of my cases, and thus establish a low-level channel, by physiological regression, if you please, and the patient will in time be able again to void his urine through the urethra, thus dispensing with the necessity of a prostatectomy and all of its baneful consequences. The patients whom I have treated had only to wear the screw drainage tube during a few months, the longest period was seven months (and that patient during this period of time gained 48 pounds in bodily weight), and it now affords me great pleasure and satisfaction to be able to state that they are all well and apparently perfectly and permanently cured. But even should the prostate fail to shrink, it would be better and safer for the patient to wear the tube permanently than to risk the danger of having a prostatectomy performed upon him.

These facts prove conclusively that the ideal of scientific progress, in surgery, is more fully consummated by this more simple, and less mutilating plan of treatment, than many of our surgeons suppose, and that human life, usefulness and happiness can be preserved to those patients whose existence is otherwise truly intolerable and in constant jeopardy.

Report of Surgical Cases in Hospital and Private Practice.

BY MANNING SIMONS, M.D., CHARLESTON, S. C.

Read at the Forty-Third Annual Meeting of the South Carolina Medical Association, held at Sumter, S. C., April 19, 1893.

Case I.—Osteo-Sarcoma of the Lower Jaw.

E. S., colored female, nine years of age, native of Edgefield, S. C., was admitted to hospital, November 1, 1892, in the surgical clinic. The patient had a large tumor of the lower jaw involving the whole of the right half of the bone and extending beyond the symphysis, almost to the attachment of the Masseter. The growth evidently sprung from the bone and had been of gradual development for two years, until, at the time that she presented herself at the clinic, it had attained the size of a large orange. The cheek on the right side was projected considerably and the lips were pushed forward and stretched until they were thin, apparently to the utmost limit. Bstween the lips the tumor presented itself to view. The cavity of the mouth seemed to be almost entirely filled by the growth, and the tongue was displaced upward against the roof and well against the cheek of the left side. On examination by the finger it was found that the tumor extended back into the upper part of the parynx and its posterior limit could scarcely be reached. The increase in size of the tumor being steady, from day to day, and the condition of the patient being wretched, from difficulty in swallowing, and interference with breathing, it was determined to give her such chance of relief as could be afforded by an operation for the removal of the growth. This operation involved the removal of the lower jaw from the temporal articulation on the right side to the border of the Masseter on the left of the symphysis. The operation was performed November 4, 1892. The usual precautions having been taken to insure asepsis, as far as it was possible to attain it, the operation was commenced by a preliminary laryngo-tracheotomy. This

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was done partly to permit the continuous administration of the anesthetic without interference with the field of operation, but chiefly to prevent suffocation by the passage of blood into the air passages. The pharynx was then packed with sponges to which strings were attached to permit their ready removal. The tongue was secured by a silk ligature passed through it, near the tip, to keep it from falling backward, when the attachment to the bone was severed. These preliminaries having been accomplished, a pause had to be made to permit the recovery of the regularity of the respiratory movements that were much interfered with by the first inhalations of the anesthetic through the tracheotomy tube, artificial respiration being necessary for a few minutes to insure it. An incision was made commencing on the right side in front of the ear, over the temporo-maxillary articulation, and carried through the tissues down to the bone, along its ramus and body, to a point corresponding to the anterior border of the Masseter muscle of the left side. Another incision, vertical in direction was made, commencing at the middle of the free border of the lower lip and carried downward, until it joined the first incision. With scissors, the flaps so marked out, were raised to the right and left; the former was carried upward to the point where the first incision was commenced; the latter to its point of termination. The vessels were taken up by the assistant with hemostatics who followed up the dissection of the flaps. The bone was divided on the left side of the symphysis, partly through with a Hey's saw, and its section completed with the chain saw. The bone was then seized with the Lion forceps and the deeper attachments were divided with scissors. The bone was readily disarticulated and removed; very little blood having been lost during the operation. The vessels were tied with catgut. The pterygoid process on the right side having been exposed and projecting into the cavity, was nipped off with the bone forceps. The sponges having been withdrawn from the pharynx, the wound was closed with silk sutures. The tracheotomy tube was removed at the conclusion of the operation, and the effort was made to close the wound in the crico thyroid membrane with sutures, but the attempt had to be abandoned on account of the depth of the wound from the surface.

The occurrence of emphysema in the tissues in the neighborhood of the tracheotomy wound presented another difficulty which was overcome by suturing the cutaneous margins to the deeper structures. The tumor after removal measured four and a half inches in length, three and a half inches in width and three inches in thickness; its weight was one pound and three-fourths ounces.

It was submitted for examination in the laboratory of the Medical College of the State of South Carolina, and it was pronounced to be an "osteo sarcoma."

The wound was dressed as usual, with iodoform and bichloride gauze and absorbent cotton. The loop in the tongue was not removed for twenty-four hours after the operation, but was attached with plaster to the neighboring integument to prevent interference with respiration.

There was a good deal of oozing from the extensive wound surface, and the patient was, for this reason, unable to rest at night. To control this flow the cavity was injected with a solution of alum and sulphate of zinc.

November 5. The patient was unable to swallow at all and nutritive enemata of milk and yolk of eggs were administered.

November 6. She took small quantities of fluid by the mouth, but not enough to permit the omission of the enemata.

The wound was dressed; the tracheotomy wound had almost completely healed.

November 8. Patient was able to take all her nourishment by the mouth in liquid form.

November 10. Alternate sutures were removed.

November 11. All the remaining sutures were removed.

November 18. Fourteenth day; the wound was entirely healed; the mouth could be closed and the lips brought into even apposition. The tongue could be freely used and the soft food could be taken without difficulty. The deformity was little to be noted.

November 19. Discharged.

Case II.—Suprapubic Lithotomy.

Julia J , white, ten years of age, had been suffering from stone in the bladder for six years.

Three years after the trouble first made itself manifest, she was brought to me by her parents and the diagnosis clearly established. Operation for removal of the stone was recommended, but her parents refused to have any operative interference, and from then, until February, 1893, they have tried various plans of treatment, suggested by their friends, for the removal of the stone, by other means than the knife.

The sufferings of the child having become aggravated from day to day, they again sought my advice after three years delay. At this time the bladder had become very much contracted and so irritable that the calls to pass water were frequent and the effort intensely painful. On examination with a searcher the stone was easily discovered. On February 1, 1893, after the usual preparations to insure asepsis, the supra-pubic operation was performed. The effort was made to distend the bladder with four ounces of water previously boiled, but not more than two ounces could be retained. The rectum was distended with a rubber bag inflated. An incision three inches long was made in the middle line, the center of which correspond to the upper border of the pubis The pyramidal muscles were separated and the dissection carried down in search of the bladder through the cellular tissues. It was soon discovered but there was no portion of the bladder to be found above the pubis, the organ being contracted and

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out of view. In the search for the bladder the peritoneal cavity was opened and the omentum escaped through the wound. It now became an important question to decide whether the high operation should be abandoned and another method adopted to avoid the risk of opening the bladder into the peritoneal cavity. It was decided to proceed with the operation. The bladder was drawn up from the pelvis into the wound by a tenaculum opened, and the stone readily removed. The edges of the opening in the bladder were sutured with a chromocized catgut to the abdominal wound; the cutaneous surface not being included. The bladder was washed out from the urethra through the abdominal wound and a tent of iodoform gauze passed into the organ.

On February 4, the strip of gauze was removed. The progress of the case was most favorable, the temperature ranging between 99° and 100°. On February 8, the temperature having reached 101° the bladder was washed out daily with a solution made from Dr. Carl Steiler's antiseptic tablets.

This procedure reduced the temperature to normal in the course of a few days.

On February 25, the wound was completely closed and the patient was discharged cured, March 3, 1893.

Remarks.—This case is reported because of the difficulties encountered in an operation now regarded as comparatively simple and as one that is giving good results.

Ordinarily, in cases in which the bladder is not contracted, there is simple room to work without endangering the peritoneum; indeed, this membrane is not often seen in the operation. When the bladder and rectum are empty, the peritoneal fold on the anterior surface of the bladder is a little below the upper edge of the symphysis. When the summit of the bladder is two inches above the pubis and the organ is pressed against the abdominal wall, the reflection of the peritoneum is about three-fourths of an inch above the symphysis. Distention of the bladder alone will elevate the folds of the peritoneum from one-half to three fourths of an inch. Distension of the rectum, although it has no effect upon the reflection of the peritoneum, pushes up the distended bladder against the abdominal wall, and the three-fourths of an inch of space, uncovered by peritoneum, may be increased from one and a half to three and a half inches. In the case in hand, all of this was changed by the contraction and non distensibility of the bladder from the long presence of the stone, greatly complicating the operation and converting it into an extra-peritoneal procedure.

The case demonstrates, however, that with strict asepsis a successful result may be attained, even after the opening of the peritoneal cavity.

P. S.—The stone removed was irregularly oval in shape, of a grayish color, and weighed one drachm and a half. Upon chemical examination it was found to be composed of a nucleus of oxalate of lime with a phosphatic crust.

Case III.—Compound Fracture of the Skull.—Operation.

A. N., white, adult, Italian, forty-one years of age, was brought to the City Hospital on the morning of December 14, 1892, from the Ashepoo Mines. He had a contused and lacerated wound on the forehead just above the superciliary ridges, about two inches in length, its center being above the nasal eminence. He was said to have been struck by a locomotive while walking across the Pon Pon Bridge, early in the morning of the day of admission. The patient was anesthetized and examined, and a fracture of the skull discovered. The wound was lengthened by an incision extending an inch on either side and the flap turned up. The fracture was found to involve the vertical portion of the frontal bone, and the displaced fragment was driven in and pressing upon the dura mater. The fragment, about the size of silver dollar, together with the Crista-Galli and Cribiform plate of the ethmoid being perfectly detached, were removed. A portion of the horizontal plate of the frontal, about the size of a silver quarter of a dollar, being detached from the roof of the orbit, was likewise taken away. The superciliary ridges on both sides were loosened, but as the attachment was thought sufficient to insure their vitality, and as they were not exerting pressure on the parts beneath, they were left in position. The wound was cleansed, washed with a 1 to 4,000 solution of bichloride of mercury, packed lightly with iodoform gauze and sewed up with silk sutures, space being left at the center to move and replace the tent. An antiseptical dressing was applied and a bandage adjusted. A simple fracture of the left clavicle about its middle, was also discovered and put up after Sayre's method. The patient did well until the 19th, the fifth day after the injury, the temperature having only once reached about 100°. On the fifth day however, he became very restless, complaining of very severe pain in the head, and the temperature at 8 A. M. reached 103°. The wound was examined and dressed, but there was no visible bagging or collection of discharge or pus. The patient gradually sank and died on the 22nd, the eighth day.

The post mortem showed that death resulted from suppurative meningitis—probably septic in its nature.

Case IV.—Head Injury.—Trephining.

A white adult, male, was admitted into the City Hospital, January 10, 1893. The patient was sent in with a history of having been struck on the head by a railroad train, one week previously. After receiving the injury, he got up and walked home, but then became unconscious and had remained in that condition. The patient was unconscious when admitted; his extremities were cold, respiration slow, pupils dilated, and there was right hemiplegia.

During the night of admission he became collapsed and it was necessary to give whiskey hypodermatically and to surround him with bottles of hot water. There

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was no wound of the scalp and the ecchymosis from the blow was very diffuse in the left side. There was no evidences of the skull to be elicited by palpation, and there were none of the symptoms ordinarily regarded as indicative of fracture of the base. The symptoms of compression of the brain were, however, marked, and the history of the case, his ability to rise and walk after the injury, and the gradual supervention of the insensibility and hemiplegia on the right side, pointed to hemorrhage within the skull, as the probable cause. With this theory in view it was determined to make an exploratory trephining with the hope of relieving the pressure. The head having been shaved and the usual precautions taken to insure asepsis, an incision was made following somewhat the direction of the temporal ridge on the left side, terminating about one and one-half inches in front of the ear. The tissues constituting the flap were reflected, the pericranium raised and the crown of the trephine applied a little in front and below the parietal eminence. A button of bone having been removed, a large quantity of dark blood escaped. This blood had evidently been effused for days, between the dura and the skull. The dura bulged up into the opening made by the trephine and was found to be tense when pressed upon with the finger. The dura was now taken up carefully with dissecting forceps and cut through with scissors. As soon as the membrane was opened, blood with small portions of brain substance, escaped. The finger was introduced into the opening and entered a cavity that had been formed by the effusion of blood into the brain substance. The cavity admitted the whole length of the little finger and extended downward and backward when a limiting wall was distinctly encountered. This cavity having been cleansed of clot and effused blood, was syringed out with a boracic acid solution. A drainage tube was carried to the bottom of the cavity, held in place by a silk suture passing through the flap, and brought out at the posterior extremity of the incision.

The wound was now closed by means of interrupted silk sutures; the head dressed, and the patient put to bed. After the operation the patient became semi conscious, but there was no material improvement in his condition. The temperature ran up to 101° and the pulse became feeble. The patient gradually sank and died on January 13.

It is a matter of regret that no post-mortem was permitted.

Case V.—Compound Fracture of the Skull.—Operation.—Recovery.

S., colored, male, twenty-one years of age, native of South Carolina, was admitted about 4:30 P. M. on January 28, 1893, into the City Hospital. The patient was led in by two other negro men who said that he had just received a blow on the head with a brick bat. There was a contused and lacerated wound just above the right eyebrow, about two inches in length, extending diagonally across the forehead, towards and almost to the roof of the nose. Already considerable ecchymosis and swelling of the right eye had occurred. Upon further examination it was found that there was a depressed fracture of the skull. There was some hemorrhage from the nose, but there were no symptoms indicating compression or other injury of the brain. The wound was cleansed and dressed antiseptically, and the patient was put to bed. On January 29, the patient was anesthetized, the usual precautions taken to insure asepsis, and the wound was enlarged to expose the seat of fracture. From the frontal eminence, about one and a half inches to the right of the median line, the fracture extended downward and inward to the nasal eminence, to the supra-orbital arch, down to the ethmoid. By means of the elevator and ronguer forceps the fragments of bone were removed; the portion of the frontal from the frontal eminence to the supra-orbital arch,—also a piece of the ethmoid, and with this, a portion of the nasal eminence. Beneath these fragments of bone was a layer of clotted blood, and when this was removed the duramater was brought into view, uninjured. The cavity was lightly packed with iodoform gauze to control oozing and the wound was dressed antiseptically.

February 2. Patient had no rise of temperature; the gauze tent was removed.

February 4. Sutures removed; there was still some bloody discharge from the nose.

February 9. A small collection of pus was discovered beneath the cicatrized wound and evacuated.

February 16. Wound was entirely healed and the patient was discharged. No trouble has since been experienced by this patient.

Case VI.—Compound Fracture of the Skull. Operation by Trephining.—Recovery.

J. D., colored, male, twenty-five years of age, was admitted into the City Hospital at 7:30 P. M., on February 5, 1893. He is an hostler and while attending to his duties received a kick on the right side of the head. The blod lacerated the scalp, severed part of the temporal muscle and fractured the skull. The fracture was situated three inches above the external auditory meatus and two inches posterior to and above the external angular process on the right side. The patient presented no symptom of compression or any interference with the functions of the brain. The wound was dressed antiseptically and he was put to bed.

On February 7, although no symptoms of compression had developed, the patient was brought into the clinic and it was decided to make an exploratory operation. The patient having been anesthetized and the usual precautions having been taken to insure asepsis, a semi-circular incision was made around the seat of injury and the flap so fashioned was reflected downwards. The area of fracture having been thus freely exposed and the pericranium raised, a stellate fracture, with considerable depression of the fragments, was discovered.

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The depressed bone was so wedged in its new position that it was found impossible to insinuate the point of an elevator beneath it. A button of bone was therefore removed with the trephine, its edge including the depressed bone. The elevator was then applied and the depressed fragments removed as they were so much splintered and detached that it was deemed unwise to leave them. The sharp edges and spiculæ were removed with Hoffmann's ronguer forceps; the duramater was not injured, but was exposed one and one-fourth inches antero-posteriorly and about three-fourths of an inch from above downwards. There was considerable bleeding from the wound. The temporal artery that was cut by the first incision was secured with hemostatic forceps and tied. The chief bleeding came from a branch of the meningeal artery and it could be controlled only by plugging with a bit of soft wood. Drainage was provided and the wound closed and dressed antiseptically. Nausea and retching came on, as the patient recovered from the anesthetic, but was soon relieved by small quantities of hot water.

On February 13, sixth day, the drainage-tube and stitches were removed, the wound having united without suppuration.

February 16, ninth day; the patient was discharged, and has had no trouble up to date, April 16, 1893.

CASE VII.—FRACTURE OF THE SKULL.—PARALYSIS.—TREPHINING.—RECOVERY.

S. R., white, fifteen years of age, a native and resident of Bamberg, S. C., received a wound from a brick bat on the right side of the head on the morning of November 23, 1892.

The missile impinged on an area bounded by the temporal ridge above, the continuation of this ridge in front with the external angular process of the frontal, behind by the union of the anterior inferior angle of the parietal and frontal, and below by the line of junction of the great wing of the sphenoid and the frontal bone. The wound was about an inch in length and the hemorrhage was profuse. The surgeon who had him in charge brought the edges of the wound into apposition by means of strips of adhesive plaster and dressed it antiseptically. Healing was rapid under this treatment, without the appearance of any constitutional trouble. There were no symptoms of concussion or compression and the boy went about his affairs as usual. About January 20, 4893, two months after the date of the injury, he cut up a quantity of wood and carried it home on his head, having previously enjoyed his accustomed good health. A few days after this occurrence he was seized with severe headache and fever. The almost cicatrized wound became inflamed and the scalp surrounding was swollen. In about a week this inflammation and swelling in and around the wound subsided, but the patient complained however, of a feeling of general lassitude and of an elongated palate. By the end of the next week he began to lose the use of his lege and found exercise painful. He was now sent to Dr. T. Grange Simons, of Charleston, for further treatment. His condition was aggravated by the railroad travel, and on his arrival, he was suffering with constant nausea, sore throat and intense headache. His expression was that of anxiety and suffering, and his intellect cloudy and sluggish. He answered questions slowly and reluctantly and his pupils moved sluggishly with a tendency to dilatation; both legs were partially paralyzed but the loss of power was most marked in the arm and leg of the left side. He was unable to stand and he was barely able to draw his lower limbs up in bed, with the assistance of his hands. The patella reflexes were absent on both sides, there was no deflection of the uvala or apparent contraction of the facial muscles.

The bowels were costive,—a micturition was not affected, there being neither retention nor incontinence. The temperature was depressed, ranging between 97° anfl 98° and his general condition anemic. I saw the case in consultation with Dr. T. Grange Simons, February 14, 1893. On examination the wound was found to have healed, except a circular opening about one fourth of an inch in diameter, surrounded by flabby granulations, and giving exit to a small amount of watery pus,—just such an opening as is found commonly leading from dead bone. By palpation over the thin depressed cicatrix, a fissured fracture of the skull was easily demonstrated. After a careful consideration of the history and present condition of the case it was decided to make an exploratory incision, having for its ultimate object the removal of the cause of the pressure upon, and irritation of the brain. At the request of Dr. Grange Simons I performed the operation February 20, 1893. A horseshoe incision was made following nearly the temporal ridge to the middle of the supra-orbital ridge on the right side. The tissues were dissected up and the pericranium raised with the elevator to fully expose the seat of fracture. A fissured, depressed fracture was found, the depressed bone being triangular in shape, the sides measuring an inch, the apex directed forward, the base corresponding to a line formed by the anterior border of the parietal bone; the upper border being about one fourth of an inch below the temporal ridge. The depressed bone was fissured and splintered and was carious.

It was so firmly impacted in its new position that it was impossible to insinuate the point of an elevator to raise it into its proper place. The crown of a small trephine was applied close to the lower border of the fracture and a button of bone removed,—thus affording working room. The depressed bone was cut away with Hoffmann's ronguer forceps. It was soft and yielded to the instrument readily. The skull in the neighborhood of the fracture, although not broken, was depressed in a circumference of one-half inch or more, so that it became necessary to remove much more than the bone actually fractured. This having been accomplished the dura mater was examined carefully to decide the question as to whether it should be incised for a further examination of the brain. It was decided not to proceed

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further, as the dura-mater did not appear to be much thickened by inflammatory deposit, nor was it depressed or adherent so far as could be discovered. The flap was adjusted, a drain of catgut having been previously put in position, from one angle to the other of the incision, and held in apposition by silk sutures. The wound was then dressed with iodoform gauze and absorbent cotton.

February 23. The improvement in the condition of the patient was marked; there was almost entire absence of headache and nausea. Digestion was improved and his general expression was more cheerful.

March 2. He was able to lift his legs unaided and to cross them.

March 3. He was carried down stairs.

March 6. He was able to walk across the room and return. His gait however, was still unsteady, but improving. The wound was healed, except at the point of the opening of the old sinus.

March 8. All dressing of the wound discontinued. Sensation and motion good, but the patella reflexes were still somewhat impaired.

March 12. The patient was able to walk about as he pleased, up and down stairs, and in the street. He was discharged restored to health.

Remarks.

Cases 3, 4, 5, 6, and 7, present features interesting and instructive, as they represent the immediate and remote effects of head injuries, with and without fracture of the bones of the skull.

Cases 3, 4, 5, and 6, together with that reported by me at the last meeting of this Association, show conclusively that serious and extensive fractures of the skull with depression of bone, may occur with no immediate serious effects upon the brain, and unaccompanied with symptoms of compression.

The facts presented by these cases sustain the theoretical proposition made by Druitt that, "It must be rare for a depression of the skull to cause great diminution of the brain cavity, so, although such diminution is very sudden, it does not seem likely that mere depression of fragments often lying loose on the dura-mater, is a frequent cause of compression. Insensibility, if present, is much more probably due to concussion or hemorrhage."

Cases 6 and 7, were almost precisely similar injuries in location, in extent, and in general features of the fracture. In one case, the injury was inflicted by the kick of a horse; in the other by a blow from a brick, but the effect of the violence upon the skull was almost identical. These two cases clearly indicate the results following operative and non-operative treatment. In the case that was threated without operation, the wound was dressed and allowed to heal over a fracture of the skull, because there were no symptoms of compression or injury to the brain. In two months the irritation of the dura-mater and brain, brought about by the depressed fragments resulted in paralysis. In the other case, although there were no immediate symptoms of brain injury or compression, the depressed bone was removed, and at the present time, more than two months since the injury, the patient is perfectly well, and in the enjoyment of all his faculties.

Case 4, is the only one of the series in which the patient presented symptoms of compression when he was admitted into the hospital. He had been injured one week before he was brought to the clinic, and had been unconscious and paralyzed on one side of the body since a few hours after the accident. There were no external signs of fracture of the skull, and none of the symptoms usually accepted as indicating fracture at the base.

The history of the case showed that he had walked home after the accident, and that the symptoms of compression supervened slowly. These facts seemed to warrant the inference of hemorrhage within the skull and the operation of trephining was perrormed on a diagnosis, based upon this evidence. The trephine was applied as nearly as possible to that portion of the surface of the skull, described as overlying the convolutions supposed to preside over motion in the upper and lower extremities. The extravasation of blood was found between the skull and dura mater and also in the brain itself. It would seem to be not assuming too much to think that, had this operation, now almost generally admitted by surgeons, to be justifiable and proper under such circumstances, been performed within a few hours after the injury, before the brain substance had been compressed, and altered beyond all hope of recovery, the result might have been different.

Case 3, illustrates the serious nature of the complication of fracture of the skull by wound of the dura-mater, —"because it admits germs and irritant fluids to the cranial cavity, and thus leads to septic meningitis, the great cause of death in compound fractures, not immediately fatal from injury to the brain."

Asepsis in this case was impossible, because the patient did not come under treatment for some hours after the injury, and the wound had probably become more or less infected, to such an extent, that justifiable antiseptic measures were not sufficient to arrest it. Drainage, the only resource under such circumstances, was not attainable, as no counter opening could be made. Discharge gravitated to the more dependent part of the cavity of the skull, and there underwent putrefactive changes, and on the fifth day, the symptoms of septic infection became manifest, and the patient rapidly succumbed.

The problem of securing proper drainage under these cirbumstances is most important and interesting, and upon its solution depends the successful result in cases of which Case 3 may be regarded as a type.

I would take this occasion to acknowledge the efficient work of the staff of the hospital, Drs. Linley, Fike Smith, and Heyward, and of my assistants, Drs. Mullally and Barbot, during these operations, and in the after-treatment of the cases.

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EDITORIALS

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Icterus.

Icterus occurs when bile-pigments enter the blood and are deposited in the tissues. Whenever the flow of bile is obstructed the pressure within the biliary ducts and liver cells becomes so great that bile enters the blood directly or indirectly by first passing into the lymphatics. But icterus may also occur when there is no obstruction to the flow of bile. In many cases where an obstruction to the flow of bile could with certainty be excluded, bile pigment and bile salts have been found in the blood. As physiology teaches that bile is only formed in the liver, it seems at first sight paradoxical that the bile-pigment and salts should occur in the blood without an obstruction of some kind. The theory has been advanced that there is a hematogenic icterus in contradistinction to the hepatogenic icterus, but this has not been conclusively proven. Liebermeister (*Deut. Med. Woch.*, April 20, 1893), gives the following physiological explanation for the occurrence of icterus without obstruction of the flow of bile. It is a peculiar property of the liver-cells, of which, however, we find an analogon in the behavior of other glandular cells, that they are capable of retaining the bile formed by them and of preventing its entrance into the lymphatics and blood-vessels. For this function of the liver-cells by virtue of which the bile can only pass into the bile ducts, complete integrity of the cells is a necessity. Whenever the integrity of the cells is interfered with by pathological changes they no longer furnish their secretion to the bile ducts alone, but a diffusion into the lymph channels takes place by virtue of a loss of their retention power. In a similar way albumin is not retained completely by the epithelial cells of the kidney but partially passes into the urine.

It has been observed in many cases of icterus where no obstruction to the flow of bile could be detected that either all or at least many of the liver cells presented more er less advanced retrograde metamorphosis. The icterus which is caused by the inability of the cells to retain their secretion Liebermeister proposes to call akathektic icterus (from akathectos—unretained. A great many cases that cannot be explained by bile-obstruction could be explained by this, the akathectic form of icterus; but the hematogenic theory for some kinds of icterus cannot, with our present knowledge, be entirely done away with. Of this form of icterus we would have to think particularly in cases where hemoglobinuria exists. Also in cases of acute yellow atrophy and acute parenchymatous degeneration where the liver cells are entirely disintegrated.

The differential diagnosis between obstruction icterus and akathectic icterus may sometimes be very difficult. As a rule it may be said that the higher degree of icterus the more likely it is due to obstruction. When, for instance, an intense icterus is accompanied by discolored stools and a total destruction of the liver cells or total loss of function may be excluded, we may with certainty diagnose a total obstruction of the flow of bile. But if, on the contrary, the icterus does not reach a very high degree and the stools contain some bile-pigment, it may be uncertain whether we have to deal with an incomplete obstruction or an akathectic icterus and other circumstances would have to be taken into consideration in order to come to a conclusion. Often an exact differentiation may be impossible, since cases occur in which both forms exist at the same time.

We must also consider that in consequence of bile-obstruction the liver cells are damaged and that when an obstruction icterus has existed a long time an extensive degeneration and disintegration of the liver cells frequently takes place. Even after weeks or months of obstruction an extensive disintegration of the liver cells may take place and destroy the life of the patient, while in others a complete obstruction may last for years before grave symptoms make their appearance.

Akathectic icterus may be caused by poisons, phosphorus, chloroform, arsenic, mineral acids, and snake bites. To this category also belongs the icterus caused by infectious diseases, for instance, yellow fever, epidemic icterus. The icterus which occurs in many diseases accompanied by fever, pneumonia, malaria, pyemia, typhoid, typhus, febris recurrens may in a few instances be due to an obstruction in consequence of a duodenal catarrh or a catarrh of the bile ducts, but in the vast majority of cases it must be explained by a degeneration of the liver cells. The icterus caused by great emotions also belongs in all probability to the akathectic variety.

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Considerations Concerning Asiatic Cholera.

In an editorial of the REVIEW of June 3, 1893, entitled "The Sanitary Condition of the City of St. Louis, With Suggestions as to Its Improvement" we have drawn attention to some prophylactic measures against cholera, which were based upon the most recent researches upon this subject. Under the title of this article we find in the *Dietetic and Hygienic Gazette* of July, 1893, an abstract of a paper by A. C. Abbott, M D., First Assistant, Laboratory of Hygiene, University of Pennsylvania, in which the same views are expressed in a more elaborate way and, considering the subject one of the greatest importance and interest, we reprint the same in its full text as follows:

The modern teaching in relation to cholera is that it is an infectious disease, depending for its existence and propagation upon a specific microorganism that is located within the intestinal canal of all individuals affected with this disease. This microorganism is now generally believed to be that described by Koch, commonly known as the "comma bacillus" of Asiatic cholera. Though there were for a time after Koch's announcement certain objections to accepting his teachings in relation to the etiology of cholera, these have now practically disappeared, and the weight of opinion is incontestably in favor of the doctrine that he taught.

When the announcement that a definite *materies morbi*, most probably standing in causul relation to this disease, had been found, the attention of the medical world was at once directed to it, and on all sides efforts were made to become familiar with the characteristics of this organism and the means commonly employed for its identification.

In so far as the morphological and cultural peculiarities of the organism are concerned, Koch left but little room for addition to his original description, but this represented only the foundation upon which was to be built a superstructure so rich in experimental data as to warrant our claiming acquaintance with the behavior of this organism under the manifold conditions of environment that it finds, not only when located within the intestinal canal, but when outside the body as well; and it is through investigations of this character that we receive the teaching upon which our plans of public quarantine and of domestic and personal prophylaxis are to be based.

In epidemics of cholera, manifestly, the danger against which we are to guard exists in the evacuations of the afflicted individual; and if the evacuations from each and every such individual were disinfected immediately upon being passed, it is safe to predict that the appearance of the disease in an epidemic form would be a thing unknown. Unfortunately, however, this precaution, simple as it is, is more often neglected than employed, and the consequences of such neglect are those that are causing the present agitation.

The question, then, that arises is: If these evacuations do not receive the proper attention at the hands of the attendant, are they likely, after having gained access to sewage or water courses, to cause a dissemination of the trouble?

Among the facts earliest demonstrated in connection with the organism of cholera, was, that it belonged to the group of bacteria known as facultative parasites, that is to say, it is an organism that is by nature parasitic, but which can exist for a time outside the body of a living host, and lead a saprophytic form of existence. Perhaps the first observation that conclusively settled this point was the finding by Koch, in a a water tank, at Sahab Bagan, Calcutta, on February 8, 1884, of living comma-bacilli, which could be continuously demonstrated in this water up to the 23rd of the same month. With this observation in hand, preparations were at once begun for determining accurately the conditions that favor the life and development of the organism in water, and though the results of these investigations are conspicuous for their lack of uniformity, they, nevertheless, demonstrate the possibility of this organism, not only retaining its vitality but multiplying, as well, in the purest of natural waters; and, contrary to what would *a priori* have been supposed, its growth is not only not favored by gross pollution of the water, but when the contamination is excessive the effect is to shorten the length of time that the cholera-spirillum may live in it. Among the first to take up this study was Koch himself, who states that in ordinary spring water or well water the organism of cholera retains its vitality for thirty days, whereas in the canal water (sewage) of Berlin it died after six or seven days; but if this microbe be mixed with fecal matters, it retains its vitality for but twenty-seven hours; and in the undiluted contents of cesspools it is impossible to demonstrate it after twelve hours In the experiments of Nicati and Rietsch it retained its vitality in sterilized distilled water for twenty days; in Marseilles canal water (sewage), for thirty-eight days; in sea water, sixty-four days; in harbor water, eighty-one days, and in bilge water, thirty-two days.

In the experiments of Hochstetter, on the other hand, the cholera-spirilla in distilled water died in less than twenty-four hours in five of seven experiments; in one of the two remaining experiments they were alive after a day, and in the other after seven days.

In one experiment with the domestic water-supply of Berlin the organism retained its vitality for 267 days; in another for 382 days, notwithstanding the fact that many other organisms were present at the same time. There is no single ground upon which these variations can be explained, for they depend apparently upon a number of factors, which may act singly or together.

Though considerable variation is seen in the results of these experiments, they, nevertheless, agree in the single point, viz., that the cholera-organism can live, and does multiply, in natural waters. As water is one of the elements essential to life that is ordinarily used in common by all the individuals composing a community, it is probably the agent most frequently con-

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cerned in the propagation of epidemic outbreaks of diseases of which Asiatic cholera and typhoid fever may be taken as types.

In very recent times we have heard a great deal about the part played by water in the dissemination of disease and while what we have heard is, in the main, true, it is only partly true, and in consequence, the public, while awake to the possible danger from this source, does not, I fear, quite appreciate the point or points at which the greatest danger is to be anticipated. The result is that precautions are taken in one direction, and neglected in another of equal or more importance. To define more clearly at what I am driving: many individuals will say with confidence that they have no fear of cholera entering their household, and will give as a reason that only boiled water is drunk, but if the individual is asked if only boiled water is used in washing his green salads, or for rinsing his milk jug, or if he is certain that boiled water is employed in the manipulation of the dairy from which he receives his milk-supply the probabilities are vastly in favor of his reply being in the negative. The danger is not alone in the drinking of waters polluted by disease-producing elements, but also, and probably to a greater extent, in the general use of such water about the household. A very vivid example of the part that polluted water may play in the production of diseases, even though it be not drunk, is the outbreak of typhoid fever in the Third Brandenburger Regiment, described by Gaffky. Every source of infection was excluded except a pump, the water of which was used in rinsing dishes, beer mugs, etc. Investigation showed that the well of this pump was in direct connection through the soil with a privy pit, a short distance away, into which the evacuations of a typhoid patient had some time previously been thrown. As stated the water from this pump was not used for drinking-purposes, but was employed only about the scullery.

A relatively small amount of water used in the average household goes for drinking purposes, the most being used for kitchen and bath purposes, and of that employed in the kitchen a large amount is subjected to the disinfecting influence of heat. A certain proportion, however, greater than that used as drink, is not heated, but is employed for rinsing, diluting etc., and in one way or another comes in contact with food stuffs, some of which are rendered free from danger through cooking, while others come to the table in a raw state. The food-stuffs from which the greatest danger in this connection is to be feared are milk and salads that are used in an uncooked condition. The rinsing of a milk jug with water consumes ordinarily far more water than the average individual takes at a draught, and if the water be but very slightly polluted with disease producing organisms, the amount taken as drink may not be sufficient for the production of disease, but if a single pathogenic germ adheres to the sides of the vessel that has been cleansed for the reception of the milk, it rapidly multiplies into many thousands after the milk has been received. Unpleasant as this thought is, it is, nevertheless, one that we cannot ignore. Though only hot water may be employed in the kitchen, there is still the possibility that the milk supplied from the dairy may at the time of delivery be acting as a culture-medium for the organism against which efforts at home are being directed. This need not, of necessity, be due to dishonest dilution of the milk with water, but may arise from the water with which the milk cans were rinsed, and in this connection dairymen should under no circumstances ship their milk in cans that have not been thoroughly scalded immediately before the milk is placed in them. In times of epidemics of diseases of this character it is neither wise nor safe to use milk that has not been subjected to the action of heat, either by boiling or steaming, and though prejudice exists, particularly in this country, against the use of cooked milk, it is, nevertheless, our duty to recommend it.

Koch's experiments, and more recently those of Uffelmann, have demonstrated that the comma-bacillus is not robbed of its vitalily by freezing, and the investigations of Fraenkel in Germany, and of Prudden in this country, have shown that natural ice may contain anywhere from a few hundred to several thousand bacteria per cubic centimetre. While the bulk of these bacteria are ordinary, innocent saprophytes, there is, nevertheless, a possibility of ice being a source of danger. I do not mean to discountenance the general use of ice, but rather the putting of natural ice into water to be drunk.

Still further, in this connection, is a consideration of domestic water filters. While the results obtained by their use are desirable from an esthetic standpoint, they nevertheless furnish a false sense of security. The best of them are reliable for only a few days, four or five at the most, and unless they are properly cleansed by scrubbing and "burning out," the condition of the water, from a bacteriological standpoint, after this period is far worse than that of the unfitered water. When filters must be used, the water to be absolutely safe, should be boiled after filtration and not before, as is often the practice.

As the danger against which we are to guard in cholera exists in the evacuations of afflicted individuals it is manifest that by careful attention to these matters we have in our power the means par excellence for limiting its spread. A great deal is said and written as to disinfection and disinfectants, and just now the makers of these preparations are busy preparing for an active trade in the near future. Fortunately, the organism causing the disease is among the least resistant of any of the known pathogenic bacteria. It does not form spores; it is highly sensitive to the action of acids and alkalies, and it is killed in five minutes when cultures of it are exposed to a temperature of 65°C. From this it is plain that it is easily within the reach of all those concerned in the treatment or care of cholera patients to render the evacuations of these patients

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entirely free from danger without the employment of complicated or uncertain processes.

The simplest ond at the same time the most reliable disinfectants for the stools of cholera patients are chlorid of lime, milk of lime, and boiling water. A one per cent solution of good chlorid of lime has been shown to destroy the cholera spirillum in feces in ten minntes. It should be made up as a two per cent solution and added to the evacuations volume for volume. Milk of lime, ordinary fluid whitewash, when added to these evacuations until the entire mass reacts distinctly alkaline completely disinfects them in one hour. Boiling hot water added to these stools in the proportion of three parts of the water to one of the evacuations, renders them free from danger in ten minutes.

When possible, the disinfection should take place as soon as the stool has been passed, but when this cannot be done, the vessel containing the evacuation or vomit should never be allowed to stand either inside the room or anywhere else uncovered. The reason for this is that flies are known to carry infection from these sources, and it is not improbable that food-stuffs have been infected through this agency. Uffelmann found living cholera-spirilla upon a fly two hours after it had come in contact with a fluid culture of this organism.

There is still another point in connection with the dissemination of cholera, viz., the possibility of its being carried from one locality to another in clothing, baggage, and effects generally of persons who have themselves recovered from the disease, or who have been in places in which the malady was prevalent. Have we any experimental data that may serve to shed light upon this part of the subject? The experiments of Koch and of Kitasato are perhaps the most reliable.

When completely dried, according to Koch's experiments, cholera-organisms do not retain their vitality longer than twenty four hours, but by others their vitality is said to be destroyed by an absolute drying of three hours. In the moist condition, as in artificial cultures, their vitality can be retained for many months, though repeated observations lead us to believe that, under these circumstances, their virulence is diminished. According to Kitasato they retain their vitality when smeared upon thin glass cover-slips and kept in the moist chamber for from 85 to 100 days, and for as long as 200 days, when deposited upon bits of silk thread.

It is hardly probable that, as dried upon clothing, the drying is absolute, and we see from the experimental data that in this condition the organisms may retain their vitality for a sufficiently long time to again give rise to the disease when favorable conditions are present. Fortunately, as has been stated, the organism is markedly susceptible to the influence of heat, and it is therefore, a matter of but little difficulty to render such clothing free from danger. For large quantities of clothing, as one finds in the effects of suspected immigrants, arrangements should be made for conducting the process of disinfection upon a large scale. Properly equipped steam disinfection chambers should be provided, and these should be under the management of individuals who have been taught the proper means of obtaining the best results from their employment.

In hospitals and in private families the same end can be obtained by the use of hot water. An ordinary wash-boiler, filled with boiling water, into which the soiled bed-clothing and underclothing can be placed immediately that they are moved from the bed or patient, not only serves the purpose, but serves it just as well as would a more elaborate apparatus.

The question concerning the disposal of the dead is one upon which some discussion has arisen, and as it is of no small importance, it might be of interest to see what experiment has taught us in this connection. In his experiments upon the destiny of pathogenic bacteria in the dead body, von Esmarch was unable to detect later than five days after death living cholera-spirilla in the body of a guinea-pig that had died of the experimental form of the disease and as a result of experiments performed in the Imperial Health Bureau at Berlin, it was found that the bodies of guinea-pigs that had died of cholera induced by Koch's method of inoculation contained no living cholera spirilla when exhumed after having been buried for nineteen days in wooden boxes, or for twelve days in zinc boxes. In a few that had been buried in moist earth, without having been encased in boxes, when exhumed after two or three months, the results of examination for cholera-spirilla were likewise negative.

There does not seem, therefore, to be any objection to the burial of the bodies, providing the interment does not take place in a locality where a spring or water course could be directly contaminated; indeed, on the contrary, this method of disposing of infected materials generally is second to cremation only in its requiring a longer time for the accomplishment of the same end.

From what has been said we see that the difficulties attending the destruction of the infective agent of Asiatic cholera are by no means so great as those that stand in the way of preventing its invasion through the manifold portals that are open to it. In the first instance Nature does much in the way of limiting the life-period of this organism, but often by no means enough to admit of this limitation coming into play before a great deal of damage has been done. As to the part that we can take in this direction I shall limit myself to these fundamental precautions, viz., if cholera is not already in the household, much can be done to prevent its invasion by total abstinence from all uncooked food or drink; if cholera is present, we can rest with an easy conscience if each and every evacuation, all vomited matters, and all soiled underclothing and bedclothing are disinfected, by any of the methods recommended, as soon as they are passed or removed from the patient, for we shall then know that all has been done that can be done by us as individuals in preventing the spread of the disease to those not affected.

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ABSTRACTS

Dangers of Vaginal Pessaries.—Dr, Neugebauer, of Warsaw, (*British Medical Journal*) has published an exhaustive analytical monograph on this question, so important in these days when gynecology is widely practiced by the surgeon and physician as well as the specialist. Two hundred and forty-two cases of injury have been collected and analyzed, five more being added in an appendix. Tabulating the results, Dr. Neugebauer presents the medical public with the following formidable statistical records: Twenty three cases of perforation of rectum alone by the pessary; twenty cases of perforation of the bladder alone; ten cases of perforation of the bladder and rectum; one case of ureteric fistula alone; one case of ureteric and vesico-vaginal fistula; one case of urethral-vaginal fistula; two cases of perforation of Douglas' pouch (neither fatal); three cases of perforation of the vaginal walls, the extruded portion of the pessary lying in the pelvic connective tissue; and six cases of entry of a vaginal pessary into the uterus.

As to age, one patient was ninety years old; she had worn a wooden pessary forty-five years. The youngest was nineteen. The time during which the pessary was worn (and often forgotten) is tabulated, the nonagenarian just mentioned heading the list; two other women wore their pessaries for forty years; and twenty, besides these three, wore the instrument over twenty years. The toleration of the vagina is very varied in different individuals, even for the same kind of pessary; thus in some cases the pessary became fixed, and tended to ulcerate into the vaginal walls within two or three months, whilst in others the appliance was worn over twenty years without causing any objective or subjective troubles. How fetor could have been absent in these tolerant cases it is hard to understand. We must remember that the same kind of pessary is not always introduced with the same skill, whilst other pessaries may be bad in principle or ill-made by the manufacturer, and, lastly, the patient very frequently forgets that she wears a pessary, hence the share of blame which the introducer of the instrument should bear is not uniform.

When the patient is not aware that the instrument has been inserted, as is often the case, the medical attendant must undoubtedly have shown great skill and gentleness in introducing it, but he may not have taken sufficient pains to impress upon her memory the fact that the instrument has been introduced, and must not be worn for many months. This is the commonest cause of pessary accidents at the present time, for the art of introducing pessaries is readily acquired, experience is easily obtained, and the favorite pessaries are no longer barbarous instruments, whilst the patient may misunderstand such information as "I have passed a Hodge", or "You are wearing a Zwanck," and go away with the belief that she is not wearing a pessary. As to the merits and disadvantages of the almost innumerable forms of pessary, we must refer the reader to Dr. Neugebauer's valuable paper. The moral is that the introduction of a vaginal pessary is a minor surgical proceeding, but if performed carelessly may lead to results in no sense "minor," but, on the contrary, very serious.

Modification in Leucocytes in Infection and Immunity.—In the *Annales de l'institute Pasteur* for February 25, Mlle. E. Everald, M. J. Demoor, and M. J. Massart publish an interesting study of the quantitative and qualitative variations in leucocytes during infection and immunity. Their experiments show than an injection of cultures containing living or dead microbes produces, in the first place, a diminution in the number of leucocytes in the circulation, especially of leucocytes having a compact polymorphous nucleus and granular protoplasm. When the animal resists the infection the period of hypoleucocytosis is followed by a brief time during which the variety of leucocytes above mentioned is very abundant; subsequently the blood resumes is normal character. This typical period of hyperleucocytosis is sometimes completely wanting in animals that succumb to infection, when death occurs rapidly, and sometimes it is replaced by a series of oscillations in the number of leucocytes when the infectious disease is prolonged for some time. The blood of an animal that has received a protective inoculation before the injection of the cultures of bacteria is richer in leucocytes than that of an ordinary animal. These observers believe that the various forms of leucocytes are stages in the evolution of the same cell, the young leucocyte having a single compact nucleus and a small quantity of protoplasm, and afterward becoming vesiculated and having the protoplasm increased; and that eventually the adult leucocyte, capable of exercising the function of a phagocyte, presents a compact polymorphous nucleus and has its protoplasm covered with granulations.

Milky Ascites.—Drs. Nieuwondt and Rosenzweig (*Brit. Med. Jour.*), read before the Cape of Good Hope Branch of the British Medical Association a paper on a case of ascites in which a milk-like fluid was found. A thin and weakly child of fifteen months was suffering from diarrhea and vomiting on May 24. By May 30 she had recovered, but on June 10 she became restless and seemed to be in pain. The abdomen wss distended with tympanites and very tender, the pulse rapid and wiry, temperature above normal. Under treatment the abdomen had become all but normal on June 16. The symptoms recurred, and chronic peritonitis with subacute exacerbations, possibly tabes mesenterica, was diagnosed. About September 1 the fluid had risen well above the umbilicus, the pulse was intermittent, and the child cyanosed. Aspiration was performed, and twenty ounces of white, milky fluid were drawn off. Aspiration was subsequently several times resorted to. During two

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months she was operated on eleven times, and six hundred and eighty ounces of fluid were taken from her. The fluid had the appearance of rich creamy milk, of specific gravity 1022. It did not coagulate spontaneously on standing. It contained a large amount of albumen and fat. Under the microscope it showed a granular basis, with large nucleated cells here and there. The treatment mainly consisted in inuction of the abdomen with mercurial ointment and extract of belladonna equal in parts, rags dipped in cod-liver oil being laid over the abdomen whenever there was too much irritation to continue the ointment, and malt and cod-liver oil were given internally. After the last operation (November 5) the child began to improve, and by January was quite as strong and healthy as before the commencement of the illness. Dr. Rosenzweig thinks that the large amount of fat granules was due to the greatly increased degenerative action in the peritoneum.

Pulmonary Abscess; Incision; Recovery.—Fairchild (Chicago *Clinical Review*) has reported the case of a miller, fifty-five years old, in which, after convalescence from an attack of pneumonia had apparently been established, febrile symptoms returned, with chills and cough and the expectoration of a small amount of extremely offensive matter, suggesting the existance of gangrene of the lung, Despite faithful stimulating and supporting treatment, the condition of the man grew steadily worse. The heart was found slightly displaced to the right. The pulmonary percussion resonance was found to be somewhat impaired anteriorly (it is not indicated upon which side, however) and the respiratory murmur enfeebled, while posteriorly the percussion note was absolutely dull, and the breath-sounds could not be heard at all. Change of posture occasioned no change in the physical signs. It was concluded that a pulmonary abscess existed, and operation was determined upon. After several unsuccessful punctures the aspirating needle was introduced into the fifth intercostal space just anteriorly to the angle of the ribs, and a free flow of pus followed. With the needle as a guide, ample incision was made, and, as the ribs were too close to permit of a satisfactory entrance into the chest, the lower portion of the fifth rib was resected for a distance of about two inches. The visceral and parietal layers of the pleura were found adherent; so that after a passageway had been made by means of the fingers a dressing-forceps was introduced, the blades widely separated, and about ten ounces of pus permitted to escape. A large perforated rubber drainage-tube was introduced to the bottom of the abscess and secured to the external wound by a suture. The cavity was thoroughly irrigated with a solution of boric acid, until the fluid returned clear. Iodoform gauze was loosely packed around the tube and a generous dressing of borated gauze applied. The patient reacted well from the anesthetic and the operation. The dressings were for a time changed daily, the discharge of pus gradually lessening. Cough and expectoration soon ceased. At the end of a year the patient was perfectly well.

MEDICAL SOCIETIES

American Medical Association.—We reproduce the following interesting report, taken from the *Medical News*, of the Section on Neurology and Medical Jurisprudence, at the forty-fourth annual meeting, held at Milwaukee, Wis., June 6 and 7:

The Chairman, Dr. C. K. Mills, of Philadelphia, delivered an address entitled,

THE INFLUENCE OF SPECIAL SOCIETIES AND SECTION ON THE DEVELOPMENT OF NEUROLOGY IN AMERICA.

He suggested the advisability of limiting the time for discussion to five minutes, except in the case of the reader of the paper, who should close the discussion. He referred to the excellent work done by the Philadelphia Neurological Society, citing this as an example of the advantage of such societies. The American Medical Association can best advance by allotting special work to the sections. The appointment of committees to do special work has been of great value. Too many isolated cases are, however, reported, and papers have not always been well prepared. A great advantage of small societies is that they secure definiteness of aims.

Dr. Henry H. Donaldson, of Chicago, read a paper on

THE WEIGHT OF THE BRAIN.

In a large number of examinations it has been shown that the weight of the brain is greater in the male than in the female; that it is not unusual in insanity except in cases of wasting disease; and that the brain wastes slightly in old age. These observations, however, are taken from the unfortunate classes. It has also been shown that the brain increases rapidly in size from birth up to seven or eight years, and thereafter more slowly up to fifteen or twenty. Then for the next few years there usually occurs a slight falling off in weight, which, in turn, gives place to an increase up to thirty-five or forty, the weight remaining constant for ten or fifteen years, and then decreasing. These data are obtained from an examination of dead, and not of living subjects; so that the curve representing the course of brain-growth cannot be taken as indicative of the growth of the individual brain. A study of the favored classes might yield different results. Brain-growth is especially rapid during the first year. Cells and their prolongations are the structural elements of the nervous system. All nerve-cells are formed before birth, and the brain increases after birth by the enlargement of the elements already present, and not by the formation of new elements. The granules in the cortex and other localities are undeveloped nerve-cells, which, by growth, are transformed into the characteristic ganglion-cells. The conditions of growth must be delicate; as two individuals, starting with nerve-cells of the same weight at birth, arrive at maturnity with very different brain-weight. The size and number of the elements and relative abundance of the medullary substance must be the

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next step in the interpretation. Race, age, sex, stature, bodily weight, mental condition, individual development, and cause of death are all factors to be considered.

Dr. C. H. Hughes, of St. Louis, read a paper entitled

Dyspepsia as a Nervous Disease, or Indigestion in Its Nervous Aspect and Relations.

He pointed out that dyspepsia, as it is generally encountered, is more frequently a secondary than a primary disease; secondary to degenerative or exhaustive changes in the central nervous system. It is a well-known fact that the lowest animals do not have dyspepsia; that the elements of dyspepsia are first observed in trained animals, in consequence of habits of life and environment that bring about the neurotrophic condition from which dyspepsia arises as a secondary manifestation.

Dr. J. Madison Taylor, of Philadelphia, read a paper entitled

Abstract of Notes on the Treatment of Exophthalmic Goiter.

He reviewed the relationship of exophthalmic goiter to other vascular disturbances associated with enlargement of the thyroid, as myxedema, cretinism, and akromegalia. Current knowledge of the physiology of the thyroid gland does not warrant the hope that much is to be expected from the use of preparations of the gland in the treatment of exophthalmic goiter. A number of cases long under observation were analyzed, and the following summary of treatment was presented:

Regulated rest, with carefully graduated activity, as time and circumstances warrant; systematic measures directed to the upbuilding of the general health; careful attention to nutrition, recognizing the trophic element in the disorder.

Careful attention to the vascular condition, which is most constant treatment. This includes various measures regulating vasomotor activity, as well as loss of nervous force through the easily disturbed nervous balance. The skin is to be acted upon from the surface by means of certain remedies that seem to exert a control over the constant tendency to vasomotor neuroses, both superficial and deep.

The searching out and remedying of constitutional defects; the elimination of accidental poisons, either diathetic or temporary, or of toxins from whatever cause.

The regulation of the nervous or emotional balance, by careful attention to the habits and environment of the individual; carefully regulating, so far as is possible, emotional strains; making much of moral teachings with those whose will-power and mental equilibrium are gravely at fault constitutionally and as the result of months or years of suffering and susceptibility.

A careful consideration of such measures as are regarded as specifics, as electricity.

Dr. Daniel R. Browley, of Chicago, read a paper entitled

Suggestions on the Treatment of Locomotor Ataxia.

He said that some cases of posterior spinal sclerosis may be cured and some may have the rate of progression considerably impeded. If the disease is recognized in the pre ataxic stage, rest for three months should be the foundation of the treatment. Potassium iodid and fluid extract of ergot in full doses, and galvanism are of value. Hypodermatic injections of morphine are valuable to relieve paroxysms of pain. The digestive organs should be carefully guarded, and alcoholic stimulants and sexual intercourse prohibited. In the second stage of inco-ordination, when the disease usually progresses rapidly, ergot will sometimes prevent the progression. Suspension is of service, continued as long as possible, from five to fifteen minutes. In this stage the injection of chloride of gold and sodium is advisable, at the same time employing zinc phosphid and sodium arseniate, as well as galvanism; no benefit may be expected from the internal administration of any preparation of silver. Cold bathing is of value; hot baths are contra-indicated. The pains of the second stage are met by morphine; sometimes phenacetin, antipyrin, or the like answers the purpose better. Patients can be taught to regain some degree of co ordination by the practice of standing with the feet close together and the eyes closed. If the patient stands in the bath-tub and has cold water poured on his spine, co-ordinating control will be more speedily regained. The bladder will need attention to avoid cystitis. Hypodermatic injections of morphine may be used for the relief of gastric crises. In the third stage tonics are indicated; galvanism to the spine and faradism to the surface; injections of cerebrin and other animal products have thus far not yielded favorable results.

Dr. T. D. Crothers, of Hartford, recommended Turkish baths in treatment, and said sometimes an apparent cure is thus effected.

Dr. C. H. Hughes, of St. Louis, suggested that in cases of apparent recovery the correct diagnosis should have been multiple neuritis.

Dr. L. Harrison Mettler, of Chicago, read a paper entitled

Hemiparaplegia; Report of a Case Completely Recovered after One Year's Duration.

The conclusion was reached that hemiparaplegia may result from a lesion in the lower part of the cord, anesthesia and paralysis appearing upon the same side of the body.

Dr. Mettler also read a paper on

Aural Vertigo—Meniere's Disease.

He said that medical literature abounds in cases wherein a sudden attack of vertigo, associated with loss of hearing, was diagnosticated as hemorrhage into the labyrinth, without further investigation into the correctness of the inference; but vertigo as a mental phenomenon seems to be of far too complicated a character to presuppose so simple an origin. If the views of Spitzka and Starr are correct in regard to the sensory paths in the medulla, they bear strongly in favor of the sensori-

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motor theory of vertigo. Every indication points to the fact that the center of equilibration must be looked for, not in one particular part of the brain, but in the harmonious action of the various sensory and motor centers one upon the other. Meniere himself seems to have believed that only the semicircular canals are affected in true Meniere's disease. He, however, ascribed cerebral symptoms to a lesion of the canals on the strength of a single observation, and even that observation was not conclusive as to that particular case. Much confusion has arisen in regard to aural vertigo. Disease of any part of the internal ear, and even of the middle ear, has been termed Meniere's, though Meniere himself restricts the designation to disease of the semicircular canals. Gowers strongly supports the labyrinthine origin of vertigo, but his proofs are inadequate. Though the implication of the semicircular canals in aural vertigo be admitted, it still remains a difficult matter to explain upon his hypothesis the vertiginous symptoms and loss of hearing in all cases. The semicircular canals in the shark have been removed without causing any disturbance of movement. There is no regular correspondence between the degree of deafness and the intensity of the vertigo with total loss of hearing in Meniere's disease. All known methods of diagnosis prove that the nerve itself and not merely the internal ear is affected. Physiologic experiment shows that simple pressure does not cause total loss of hearing, when no injury is done to the cochlea, and no case has ever been reported in which the cochlea was primarily affected, with consequent involvement of of the canals and vertigo. Hence it is concluded that in Meniere's disease the lesion must concern the whole labyrinth or lie entirely outside of it. There is little doubt about the central nature of the disease in many of its aspects. The sense of irritation may sometimes be in the semicircular canals, just as sometimes it may be in the eye or in the stomach, but the immediate cause of the vertigo cannot be there, and in view of the few physiologic and pathologic data on hand, there is no justification in assigning all cases of vertigo to an unknown and undemonstrable lesion of the internal ear.

Dr. William Fuller, of Grand Rapids, Mich., read a paper entitled

A Method of Localizing Points in the Hemispherical Ganglia.

He presented a model of the brain made by hardening with great care, separating the lateral halves and slicing each half into segments, three-sixteenths of an inch thick, perpendicular to the long axis of the brain.

Dr. Fuller also presented a communication entitled

An Examination into the Question of Priority in Craniectomy for Idiocy.

He stated that in 1887 he performed craniectomy for the relief of idiocy, an account of which was published in the *Canadian Medical and Surgical Journal*, in 1887. The operation was ridiculed in both America and Europe at the same time, but has since been claimed as originating with European surgeons.

Dr. Theodore Diller and Dr. J. J. Buchanan, of Pittsburg, Pa., presented a paper entitled

A Case of Subcortical Cyst of the Lower Part of the Ascending Parietal Convolution—Operation—Recovery.

Nearly all of the important symptoms of intra-cranial growth were present: Headache, vomiting, vertigo, convulsions, and paresis. From the history of the case it was evident that a lesion was located in the left Rolandic region, involving principally the hand center. The absence of sensory symptoms seemed to indicate that the lesion was situated anteriorly to the Rolandic fissure, and from the fact that paresis preceded convulsions, the lesion seemed probably a subcortical one. The relative method of Thane was employed to locate the fissure. A thin sheet of aluminum was employed, cut in the form of a segment of a circle, having an angle of 67° and a radius of three and three-eighths inches, and moulded to fit the average skull, when its straight sides are applied respectively to the median line and to the part of the scalp corresponding to the fissure of Rolando. While the result of the operation fell considerably short of an entire cure, and was, in a measure, disappointing, yet it was followed by distinct and unmistakable benefit to the patient. It is too early to tell what the ultimate result will be. The case offered strong evidence in support of the view that the ascending frontal convolution is exclusively related to motor functions. The cortical representations of the forearm and hand are located in the ascending frontal convolution; the cortical subdivisions of the arm-area are related to each other as follows in the ascending convolution: that for the shoulder is highest, with the elbow, wrist, fingers, below in the order named; the center for the thumb is located in the ascending parietal convolution, a little below that for the fingers. The case confirms the theory that a subcortical lesion is likely to produce paresis before convulsions, and exemplifies the general principles of localization as enunciated by Horsley, Sequin, Mills, and others.

Dr. C. B. Burr, of Pontiac, Mich., read a paper on

Surgery in the Insane.

He presented a collection of cases illustrating phases of surgery that come under the eye of the hospital alienist, including gynecologic operations; also two cases of melancholia, in each of which trephining had been performed, without relief. Cases illustrating the effect of operations, *per se*, are well known to alienists and which surgeons are of late beginning to recognize. Hernia and perityphlitis are relatively common in the insane, but often escape notice.

Dr. H. N. Moyer held that the element of consent is extremely important, especially when surgery of a radical character is practiced, as for instance, the removal of tubes and ovaries when there is no apparent local disease, for the effect upon the general nervous system. He said that shock is comparatively slight in operations upon insane persons, notwithstanding their general low nutrition.

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Dr. James G. Kiernan pointed out that the position of a superintendent of an insane asylum is a *quasi* legal one. He is the guardian of the patient, and under such circumstances has the right to give consent for the patient of an operation. Especially is this true in case of emergency. The removal of healthy tubes and ovaries is not likely to be followed by permanent improvement. The counter-irritation only produce a temporary improvement, but such operations are not justifiable.

Dr. G. F. Lydston, of Chicago, Ill., read a paper on

The Therapeutic Use of Static Electricity.

He contended that the use of static electricity in medicine has been too closely restricted to the more advanced neurologists. He has found it a valuable agent, especially in the treatment of neurasthenia, particularly in the forms associated with brain-fatigue and sexual hypochondriasis. The application of the static current to the spine has seemed to have a marked stimulating effect upon the genito spinal center. In no case have any injurious effects been observed, but in some sensitive and neurotic patients the current should be used with a certain degree of circumspection.

Dr. L. C. Gray, of New York, said that too much had been expected in the first place from the use of static electricity. The results had consequently proved disappointing. There was a revulsion of feeling against the agent and it had been largely discontinued, but it seems to be coming into use again. The improved machines of the present day are a great advantage; the results have been surprising in certain cases; especially has it proven useful in cases of muscular atrophy.

Dr. Daniel R. Brower, of Chicago, called attention to the usefulness of the static current in cases of chorea, and described his method of application, which consists in placing the patient on an insulated stool and applying the current for from ten to fifteen minutes.

Dr. Harold N. Moyer, of Chicago, presented a paper on

Sodium Arseniate in the Neuroses.

He said that arsenic holds a prominent place in the treatment of nervous disorders. The objection to the use of Fowler's solution of potassium arsenite hypodermatically is that it is exceedingly irritating. Arsenic injected beneath the skin has a far less toxic effect than when administered by the mouth. Potassium arseniate possesses the advantage of giving rise to no local irritation, so that much larger doses can be employed. Dr. Moyer has given a single dose a quantity of sodium arseniate equivalent to from forty to sixty minims of Fowler's solution. It is a common practice to give the equivalent of thirty minims of Fowler's solution as the initial injection. In order to prepare accurate solutions for hypodermatic use, it is necessary to subject the salt to a temperature of about 300°, which drives off the water of crystallization.

[to be concluded].

NOTES AND ITEMS

The Significance of the Diphtheritic Membrane in its Relation to Treatment.—Dr. M. J. Oertel (*Berliner Klinische Wochenschrift*) divides cases of diphtheria into two classes: 1. When the local manifestations are at the outset superficial; and 2. When they commence in the tissues themselves. Cases of the first class are due to direct infection, and require careful antiseptic treatment, which consists in the destruction of the bacteria and prevention of their increase, and the absorption of the virus which they produce. The further production of the membrane will be prevented by the removal of the cause of the disease.

The problem is to keep a sufficient amount of the antiseptic material for a sufficiently long time in contact with the diseased mucous membrane for its effectual operation. The use of remedies by gargling is unsatisfactory on account of the short time during which the remedy is in contact wiih the membrane. Painting the diseased mucous membrane with stronger antiseptic remedies produces much shorter time of contact; the remedy is diluted by saliva and mucus; it is not thorough in application, and requires frequent repetition. The application of remedies by the use solely of the steam atomizer is recommended; this permits of three to five minutes' contact, and can be repeated every two or three hours. Carbolic acid, in from 2 to 5 per cent solution, used as above, has never given rise to poisoning, and yet seems to be the most suitable remedy.

In cases of the second class, where the membrane is a secondary manifestation of a primary general infection, the problem is entirely different. The place where the local antiseptic treatment should reach is one deep in the mucous membrane. The diphtherotoxine is already taken up by the lymphcells of the blood and lymph and is widely distributed. Here local treatment, which tends only to the annoyance of the patient, and cannot exert a favorable influence upon the disease, is superfluous. However, the use of so called solvent gargles (alkalies, lime, soda) if of use in preventing stenosis of the air-passages, and, by disinfecting the mouth, in preventing the development of a septic form—a croupous form of diphtheria. Useless as remedies, and disturbing to the patient, are nitrate of silver, chromic acid, chloride of iron, and the galvano-cautery. Of constitutional treatment, that by blood-serum is based upon purely experimental researches and is uncertain, and chlorate of potash has been abandoned. The preparations of mercury, inunction or internal use of calomel, sublimate, or cyanide, have been followed by favorable results, although the knowledge of the action of these remedies upon zymotic processes is not sufficient to justify the statement that they possess a specific action against the diphtheritic process. From an empirical

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standpoint, the use of the cyanide is vindicated; so also is that of quinine. Its antipyretic and parasiticidal action is, however, open to question.

Dr. Lapponi, the Pope's physician, says that his illustrious patient is in excellent physical condition, and ought to live for many years to come.

Orificial Surgery.—The next annual class for instruction in orificial surgery will assemble in Chicago on the morning of September 4. It will have a four hours' daily session during the week. For particulars address, Dr. E. H. Pratt, R. 56, Central Music Hall, Chicago.

Mr. Luther Holden.—The distinguished author of "Holden's Osteology," and "Manual of Dissections," recently passed through the country on his way home after a tour of the world. Mr. Holden is seventy-eight years of age; he is, however, as clear in mind and body as when he wrote the books which have been read with genuine pleasure by successive generations of medical students.

The World's Fair.—The various surgical exhibits at the Chicago Exhibition are to be found in the Department of Liberal Arts, in the gallary of the Manufacturers' Building. By exception, however, and for some unexplained reason, the principal part of the German surgical exhibit is in the northeast gallery of the Electricity Building. The exhibit of surgical splints is near the center of the United States surgical exhibit.

Woman Students at French Faculties.—There are at the present moment one hundred and thirty-one ladies registered as students at the seven French medical faculties. Of this number ninety five are Russians, twenty-five French, four Roumanians, two Bulgarians, two Servians, one German, one Turk, and only one English. No one who has studied in Paris can avoid remarking the preponderance of the Muscovite element among these fair aspirants for medical honors.

The Esteem of One's Fellows.—In the course of the Croonian Lecture (*Med. Rec.*) delivered recently by Virchow, he says: "Who of us is not in need of friendly encouragement in the changing events of life? True happiness is not based on the appreciation of others, but on the consciousness of one's own honest labor. How otherwise should we hold our ground in the midst of the turmoil of the day? How should we preserve the hope of progress and of final victory against the attacks of opponents and the insults which are spared to no one who comes before the public? He who during a long and busy life is exposed to public opinion certainly learns to bear unjust criticism with equanimity; but this comes only through the confidence that our cause is the best, and that some day it must triumph. Such is our hope in our wrestlings for progress in science and art; such is our hope in our struggles for civil and religious liberty, and in this hope we gradually become hardened against malicious attack. It is akind of immunization which, I acknowledge, has also great drawbacks, for this hardening toward unjust attacks leads very easily to a similar indifference toward just attacks, and, owing to the tendency to contradiction rooted in the nature of human thought, it finally leads also to indifference to praise and recognition. One withdraws again and again into one's self, discontented with the world and with one's self also; but who can so completely retire within himself that the consciousness of the insufficiency of human thought and that the criticisms of opponents are justified, cannot break through the crust of even the most hardened self-consciousness? Happy is he who has courage enough to keep up or regain his connections with other men, and to take part in the common work. Thrice happy he who does not lack in this work the flattering commendation of esteemed colleagues."

RAILROAD : NEWS

Special Railroad Rates for the First Pan-American Medical Congress to be held at Washington, D. C, September 5th to 8th Inclusive.—The Chesapeake & Ohio Railway, from Cincinnati or Louisville to Washington, D. C., is the quickest, most picturesque, interesting and comfortable line between those cities. Their trains are vestibuled throughout, lighted by electricity and carry the latest pattern of through first class coaches, Dining-Cars and Sleepers.

The scenery along the upper Ohio and Kanawha Rivers, through the gorgeous and canons of the New River, among the Peaks and Valleys of the Blue Ridge and Alleghaney Ranges and over the fertile plains and historic battle fields of Virginia constitutes a kaledioscopic panorama that for variety, beauty, grandeur and historic interest is unequaled in this country.

Ths rates of fare will be the same by all of the lines and while they have not been agreed upon, they will positively not be more than one and one-third fare for the round trip. The one way rates ars as follows from St. Louis $19.25, Chicago $17.50, Cincinnati $14,00, Indianapolis $16.00, Louisville $16.00.

Tickets will be sold at those places September 1 to 4, inclusive, good to return leaving Washington as late as September 12. Ask for your tickets "via the Chesapeake & Ohio Railway.

If you will advise me what day you will leave any of the places named and whether in the morning or evening and how many berths you will want I will reserve them through to Washington for you.

Write for a copy of "Virginia in Black and White."

E. B. Pope,

Western Passenger Agent, C. & O. Ry., St. Louis.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

Salpingitis.

BY F. BYRON ROBINSON, B.S., M.D., OF CHICAGO,

GYNECOLOGIST.

If any gynecologist, who has performed fifty laparotomies and studied the Fallopian tubes carefully in at least a score of post-mortems, will hold a clinic for women in the midst of a large city he will be astonished at the amount of tubal disease actually existing.

Practical daily experience convinces beyond the shadow of a doubt the terrible prevalence of salpingitis among the masses. The triumvirate of causes which lie at the bottom of salpingitis are (a) *gonorrhea*; (b) *abortion*; and (c) *labor*. It is finally learned by a gynecologist who examines fifty to seventy five women a week that the greatest and most prevalent disease of the female genitals lies in the tubes.

On examining one of these women per vaginam one finds at the side or behind the uterus an ill-defined boggy mass, tender to touch and immovable. Such boggy mass is almost sure to be salpingitis, acute or chronic. The subjects of such cases of salpingitis complain in obscure terms of disturbed health.

These cases become much better under hot douches of a gallon of water, a handful of common salt, and a teaspoonful of alum given t. i. d. The salt stimulates the mucous membrane with abnormal reaction. The alum contracts the mucous membrane and lessens the catarrhal secretion. The hot douche contracts the tissue and keeps out excessive venous blood. In short it makes the pelvic organs less vascular. The pelvic organs thus regain original tone. But such cases do not generally get well. Their disease is recurrent when the monthly engorgement of blood presses again into the rhythmical pelvic viscera. The removal of the tubes and ovaries makes them well. If the organs could be still they would get well themselves, but a weak organ taxed monthly becomes still further deranged.

Having examined so many cases of salpingitis in almost all stages, clinically, from autopsy, and especially after removal by laparotomy the writer notes that quite a distinct series of pathological changes may be detected.

Excluding tubercular tubal disease which constitutes perhaps three per cent of removed appendages it may be said in general that the infection, which causes the salpingitis, enters the vulva. The landmarks which make prominent the disease at the vulva are (a) the urethra; (b) the vulvovaginal glands. As the infection ascends the vagina does not comparatively suffer much. The first real home of the infection is the endometrium where it may remain as endometritis for a long period of time. But the endometritis steadily advances into endo-salpingitis. It frequently advances by jumps at the climax of the monthly tubal rhythm when the circulatory congestion is at its maximum, then the tube is so vascular that germs and ptomaines run riot and disease fixes itself in new territory. This brings us to the first stage of tubal disease or general salpingitis. It must be remembered that the tube has three distinct coverings, (a) the peritoneum; (b) the muscular coats; and (c) the mucous membrane.

A significant fact to keep in mind always is that the tube opens by a wide, funnel-shaped fringed orifice into the peritoneal cavity. This peculiarity of higher life is the most dangerous at man. In the lower scale of life the tubes open into pouches of peritoneum or onto the ovary as a duct like in the hen. Now in the first stage of salpingitis the mucous membrane swells. The tubal plicæ, rich in intricate foldings, become edematous and succulant. The mucous membrane of the fimbriæ especially become swollen, edematous and friable. The swelling of the mucous membrane near the uterine osteum soon almost occludes the tubal lumen and thus hinders any flow toward the uterus. The congested tubal mucous membrane will secrete fluid and now this fluid must accumulate in the tube, be reabsorbed or pour out into the peritoneal cavity through the fimbriated end. This brings us to a second and very important stage in salpingitis, *i. e.*, the closure of the fimbriated osteum. It closes in two ways which the writer has many times observed. The method of closure tells the tale of future results to the patient. The most favorable closure of the fimbriated end to the patient is when the whole of the fimbriæ are turned back into the lumen of the tube and the tube is really closed by the contractions and adhesions of the peritoneum. Such tubes are now sealed at both the uterine and abdominal end. The

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fluids—pus, mucous and serum—then collect in the closed lumen of the tube or generally first make a pyosalpinx and as time goes on the pus frequently becomes absorbed resulting in a hydrosalpinx. Such methods of tubal closure does not allow the infection to spread and infect adjacent tissue and such tubes are quite free from adhesions.

The contents of closed tubes may remain in the same condition far long periods. Their walls thicken especially from the inside by deposits of lympho-inflammatory products which mainly effect the muscular layers and to some extent the mucous layer but the mucous layer generally becomes destroyed beyond recognition.

It surprises certain gynecologists that women with such tubes often complain but little and often recover—because the tubal contents—pus, serum or mucous—are encapsulated. The second method of closure of the abdominal ostium in salpingitis is the disastrous one. It is the method which results in unending recurrences and exacerbations. In this second process of closure the fimbriæ do not all turn back into the lumen of the tube like the petals of a flower but some few are caught before they are able to turn back into the tubal lumen bp the contractions of the peritoneum. These few fimbriæ are then strangled and fixed in the peritoneal contractions so that we now have a part of the fim briæ turned back into the tubal lumen and a part are left outside in the peritoneal cavity. The disaster lies in the few fimbriæ which are caught and left ontside the tubal lumen, because it is the mucous membrane that carries infection. Hence at each rhythm when the mucous membrane is highly congested there is a chance for reinvasion of the old infection. The peritoneum adjacent to the abdominal ostium receives a new dose periodically and the woman is subject to recurrence of pelvic inflammation. In such subjects are found the extensive and almost immavoble adhesions which pervade the pelvis. In such subjects the tubal contents do not accumulate so much because they are not fully encapsulated and such cases are the ones who have fistulæ—vaginal, vesical or rectal, etc. The writer has frequent ly observed these two methods of tubal occlusion. In the one the fimbriæ are rolled up inside the tubal lumen like the petals of a rose. The whole mucous membrane is encapsulated within the tube. In the other method the fimbriæ are partly within and partly without the tubal lumen, so that infection can periodically involve the peritoneum. If women could be prevented from the rhythm of the monthly after acquiring salpingitis she would recover without operation or treatment.

I leave out of consideration salpingitis from ectopic pregnancy. The forms of salpingitis early recognized are:

1. The first and most frequent is *endo-salpingitis*. It may be catarrhal or suppurative. The mucous membrane may lose its cilia or its epithelium. Fluid accu mulations may dilate and sacculate the tubal lumen. Pus may form and be absorbed and leave the mucous membrane with such a catarrhal condition as to secrete serum and make a hydro salpinx. Gonorrheal endo-salpingitis does not get well very easily. It is very persistent.

2. The second form of salpingitis very frequently observed accompanying endo-salpingitis is *salpingitis*, *i. e.*, inflammation of the muscular wall of the tube. This so far as the writer is able to judge is a secondary process. As salpingitis proceeds the products of inflammation infiltrates the muscle and soon degenerates the muscle by compression and the thick walled tube is simply inflammatory products.

3. The third form of tubal inflammation is *peri-salpingitis*, *i. e.*, inflammations of the peritoneum covering the tube. This is easily recognized by traces of old adhesions, flakes of partially organized lymph and roughened points on the tubal peritoneum. It is secondary to endo-salpingitis.

The Advantages of Antiseptic Irrigation of the Parturient Canal Before and After Labor.

BY T. RIDGWAY BARKER, M.D.

Read before the Philadelphia County Medical Society, April 12, 1893.

"To avoid danger is a thousand times wiser than to prepare to meet it."

Prompted and emboldened by this thought, I present for consideration and discussion the advantages to be gained by the employment of ante-partum and post-partum vaginal irrigation.

Having accepted as proven the role which micro-organisms and their prodncts, ptomaines, play in the development of disease, it has been my practice for the past two years to emplov, in cases of confinement, irrigation of the parturient canal.

The results from this routine method have been so uniformly satisfactory, aside from any theoretical con siderations, that I would fain persuade every practitioner of obstetrics to give the plan an impartial trial.

While it has, I am well aware, no definite claims to novelty, yet the rules governing aseptic midwifery are so generally disregarded in private practice that further study cannot be otherwise than beneficial.

It is certainly a fact that strong antiseptic solutions containing mercury or carbolic acid are likely, and will, if long continued, poison the patient. Garrigues, in his paper on "Corrosive Sublimate and Creolin," published in *The American Journal of the Medical Sciences*, 1889, reports twenty cases of death from this drug in obstetrical practice. But any valuable remedy will fail to give good results if not properly administered. Therefore, its abuse cannot be said, in any way to militate against its use.

The method which has given me the best results consists in having the external parts about the genital region carefully and thoroughly scrubbed with soap and hot water with the onset of true pains. This is followed

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by a second cleansing with 1 to 1000 bichloride of mercury solution, the final washing being with boiled water. This completes the toilet of the entrance to the vestibule of the birth canal. As to the treatment of the canal itself, a fountain syringe is filled with one quart of hot, boiled water containing bichloride of mercury 1 to 5000. The ordinary nozzle made for vaginal use, after being rendered aseptic, is introduced into the vagina and carried up to the anterior vault of the canal, the stream of water having been running freely before introduction, to expel all air from the tube. When about half the solution has been used in bathing this portion of the vagina the nozzle is slightly withdrawn and made to enter the posterior pouch. In this way the whole mucous surface is irrigated, and at the same time some of the overflow bathes the cervix.

It is very desirable to finish this step in the procedure before rupture of the membranes, as their presence tends to prevent the escape of the antiseptic fluid into the uterine cavity and between the uterine wall and decidua. It will be noticed that so far our ante-partum efforts at cleanliness have been principally confined to the vagina, and this is the point to which our attention should be especially directed, for the source of infection is far more likely to lurk here than in the pregnant uterus.

The vaginal douches are to be administered with the female in the semi-recumbent posture, in order that free drainage may be secured and no fluid permitted to collect behind the posterior margin of the vulva. The antiseptic irrigation is to be followed by a free bathing of the parts with boiled water, so that absorption of the mercury may be rendered impossible. By these means we run no risk of mineral poisoning, while we do secure a perfectly aseptic condition of the birth canal.

When can we, without such precautions say, with any degree of certainty, this woman's birth-canal contains no gonococci or other noxious germs. Her family life may have been the purest in every particular, yet gonococci may be present. The occupation of the husband, as Lapthorn Smith, of Montreal, has pointed out, through a lack of personal cleanliness, may infect his wife. Such occupations as scavengering, rag-picking, and the like, render a man especially liable to infection when the simplest rules of hygiene are neglected. The same author pertinently remarks, "Before labor begins we should disinfect the vagina of all women whose husbands have had gonorrhea, taking it for granted that all have had it unless we have proof to the contrary."

Some writers, in spite of such facts, declare antiseptic irrigation unnecessary, because, they argue, that Doderlein's experiments, as to the nature of the micro-organisms found in the healthy vaginal canal, prove conclusively that they are non-pathogenic; but I would make answer, that what is harmless in a healthy vagina with a perfect mucous membrane is not necessarily so when its walls have been overstretched and are the seat of lacerations. The science of bacteriology has not yet declared the law that non pathogenic micro-organisms always remain so under all conditions and circumstances.

Among those who are opposed to such prophylactic measures as I have suggested, may be mentioned Rosenberg, of New York Polyclinic, who states in a paper published in the *Medical Record*, February 4, 1893—"So far I have not said anything about the prophylactic vaginal douches, and I only wish to speak about them to condemn their routine administration. I do not believe that the vagina can be made sterile, no matter how much douching is done; but I do believe that infectious material is very frequently carried into the genital tract by dirty instruments or fingers."

Now it goes without saying, that if you are going to employ dirty instruments and fingers in your pseudo-attempts at aseptic midwifery, you had far better avoid examining the patient at all. In fact, it would be wiser to secure some one else to take charge of the case. Therefore, such an argument is fallacious.

But what is still more surprising is that the same writer in his article, should cite, in support of this view, several cases of puerperal infection in which the women died. They were supposed to have aseptic parturient canals, when in reality septic matter had been introduced by unclean midwives in their efforts to ascertain the female's condition previous to the arrival of the medical attendant.

Here we have a striking example of our inability to distinguish between an aseptic and a septic birth-canal. The life of the woman is thus risked unwarrantably when we have nothing but pure assumption on which to base our opinion.

Some extremists have gone so far as to recommend the employment of vaginal antiseptic injections as early as one week, or more, before the onset of labor, and they advise continuing them until the first stage is well advanced.

This is, perhaps, carrying the principal of antisepsis too far, but better than that not far enough. The importance of having an absolutely clean nozzle to the syringe, cannot be too forcibly impressed. Dirty tools can never be expected to do clean work.

Earle in a paper published in the Chicago *Medical Journal and Examiner*, tersely remarks, "You cannot carry out intra uterine injections with a half ounce syringe and a goose-quill." Were the benefits arising from vaginal irrigation previous to delivery wholly included under the term asepsis, we might rest well-satisfied, but that is not all, for the hot fluid fills a useful purpose in softening the cervix, thereby lessening the pain incident to its dilatation.

Some may urge against the practice, that it washes away the natural mucous secretion which is intended to lubricate the parts and facilitate the passage of the infant, but this is a theoretical objection which has no existence in fact. Quite the reverse one finds to be the case, which is confirmed by Garrigues, of the New York Maternity, who states, in a paper read before the

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Section on Obstetrics and Gynecology, in 1892: "Personally, I am opposed to rubbing and scrubbing the vagina, as some think necessary, but as to a vaginal injection before delivery, I believe yet, that it is useful. It will remove both dirt and microbes, and if, at the same time it removes a layer of mucous that lubricates the vagina, and, therefore, protects the perineum, it is easy to see that new mucous is poured out in abundance to replace the first."

With an aseptic parturient canal our fears of infection of the eyes of the infant, as it is driven along, are practically nil, for there is nothing to give rise to ophthalmia, that terrible disease so fatal to the sight. As my paper does concern itself with other necessary precautions, such as those relating to the clothing and the person of physician, nurse, and patient, no mention will here be made of them.

Having outlined the ante-partum procedure which would seem to recommend itself to the careful accoucher, we have still for consideration some post-partum measures.

Whether the case has been one of natural or instrumental labor makes no difference, all must be treated alike, save the latter class will require extra care and attention, since the doors for the entrance of septic matter are more numerous and wider open.

No matter how skillfully one may have delivered the placenta and secundines, we never can know positively whether everything has been expelled. Let the examination of the placenta be ever so minute, a fragment may be left behind, or a shred of membrane that the eye of the attendant has failed to note the absence of.

Appreciating this fact, it is but fair to assume that there is in every uterus after delivery, a cavity which contains material which; if it becomes infected, will place the patient in great danger. Micro-organisms feed on dead tissue, and by their multiplication pour out ptomaines which, when brought into contact with living cells, cause their death.

Thus is formed the virulent poison which the vessels are ready to suck up and carry through the system. Let the source of the pathogenic organism be what it may, we do know that when it takes up its residence in the utero-vaginal canal it is a terrible enemy to do battle with. Therefore, it would seem but reasonable to institute prophylactic measures to prevent the entrance and development of these breeders of disease, which can best be accomplished by the employment of antiseptic irrigation.

Mercury in the form of corrosive sublimate is scarcely suitable for post-partum vaginal irrigation, since it is so readily absorbed by abraded surfaces. Hence, carbolic acid, creolin, boric acid, or peroxide of hydrogen are to be preferred. The advisability of resorting to irrigation immediately after labor is questionable, since the likelihood of inducing hemorrhage, introducing air, or irritating fluid into the yet unsealed uterine sinuses is possible.

After the lapse of twenty four hours, however, I would recommend a vaginal douche of carbolic acid, one drachm to the pint, or creolin, one per cent, followed by an equal quantity of boiled water.

It would appear from a study of the clinical symptoms of puerperal infection, that the first manifestations occur on the third or fourth day; in other words the lochial discharge in the first twelve hours is so free that no contamination by micro-organisms is possible, but on the second day, the discharge not being so abundant, the germs gain a footing, and after a lapse of twenty-four hours pour sufficient poison into the blood-stream to jeopardize the life of the female.

Earle, quotes Bakelmann, as deeming intra-uterine injections indicated when, forty-eight hours after birth, the temperature rises to 101.5° F. to 102.2° F., with frequent pulse, without a recognizable cause for it; also, when fragments of placenta and membranes remain in the uterus as a cause for disturbance, and when symptoms of infection of the endometrium are present.

Of course he does! Who would not under such circumstances? But where is the wisdom of waiting until these disintegrating masses become infected before bringing about their expulsion? Why, indeed, delay in removing the oil-can, so to speak, from the neighborhood of the fire when experience unmistakably teaches us that it will explode if only left there long enough? Let us, at least, be reasonable and hasten with all judiciousness to place beyond reach the dangerous element.

If our knowledge of septic processes is worth anything, it surely ought to convince us that disintegrating matter has no place beside the living, and the wider the range of separation the safer for the individual. When we resort to vaginal irrigation at the expiration of twenty-four hours, we find the canal in a condition suitable for such a procedure. If the amount of carbolic acid does not exceed one drachm to the pint of warm water, and free drainage is secured, surely no poisoning is possible. Too much stress cannot be laid on the importance of having the female occupy a semi-recumbent position so that the escaping fluid may tend to gravitate toward the patulous vulvar orifice. The pressure by which the solution is forced into the passage should be as low as possible, the object being to irrigate rather than inject.

As is well known, when the woman lies on her back the discharges accumulate at the posterior and inferior portion of the vagina and form a pond well-suited to become the feeding ground for pathogenic organisms. By destroying this nest, which antiseptic irrigation accomplishes, we stop the production of ptomaines and relieve the system of further danger from infection. Appreciating, therefore, the great advantages and the increased safety to the parturient, can we do better than adopt for our motto in obstetrics, and carry out in practice—"*Cleanliness first, last, and all the time.*"

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EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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The Action of Glycerine in Nephrolithiasis.

Besides piperacine, which is the best known solvent of concretions of uric acid and its salts, glycerine has attracted attention in recent literature as a remedy in nephrolithiasis. Upon the administration of fifty to one hundred cubic centimeters of glycerine, concrements to the size of a bean have been observed to pass away with the urine in patients suffering from nephrolithiasis fourteen to fifteen hours after taking the drug, the urine also containing a remarkable amount of mucus. Two or three hours after the drug has been taken pains occur with great regularity in the region of the suspected kidney. In order to explain this action of glycerine, A. Hermann has made experiments, which have been published in the *Prag. Med. Wochen.*, from which the following may be deducted:

The largest part of the glycerine, taken internally, is secreted unchanged within the next twenty hours with the urine and the latter is neither quantitatively nor qualitatively changed, excepting that it becomes slippery. The solving power of glycerine for concrements is extremely small, even at the boiling point. When introduced into the ureter of rabbits by abdominal section no contraction of the involuntary muscular fibres of the urinary passages takes place. When administered to excess, per os, similar symptoms occur as are observed when a saturated solution of sodium chloride is injected into the veins. The action of the drug can, therefore, only be a mechanical one. Glycerine, after entering the blood, withdraws a large amount of water from the tissues, which passes through the kidneys, the mucus in the urinferous tubules, shrinks in consequence of the withdrawal of water by the glycerine, and is thereby loosened and with the concrements washed away by the slippery urine.

Epistaxis.

Dr. Mounier writes in *La France Med*: Epistaxis has its origin, in nine cases out of ten, in the anterior part of the septum, but it may at times come from the pharynx, even when the latter is healthy. Bleeding from both nares or from one does not prove that the origin of the epistaxis is in the nasal cavities. While plugging of the anterior nares often stops the bleeding, one must be acquainted with the fact that complete plugging of anterior and posterior nares may not stop it, and that treatment of the naso-pharyngeal cavity with hemostatic fluids may be necessary. One of the best hemostatics is antipyrine in an aqueous solution of 1:10 or 1:5.

To the above statement of Dr. Mounier, we wish to say, that we have observed a case in which epistaxis and bleeding from the mouth occurred at the same time, and where its origin was at first suspected to be in the naso-pharyngeal cavity. Upon laryngoscopic examination by Dr. Mulhall the bleeding point was discovered in the trachea just below the commissure of the vocal cord. By the expulsive efforts of coughing some of the blood had been projected into the nasal cavities and hence the patient's statement that he was also bleeding from his nose.

Pneumonic Fever — Its Symptomatology.

The *Journal of the American Medical Association*, July 29, 1893, contains an article upon this subject by Edward F. Wells, M.D., of Chicago, which is remarkable for its completeness, it containing no less than 175 quotations from some of the best authors. Omitting the quotations and some of the histories of cases we take the liberty of reproducing the article as follows:

Cough is present in almost every case of pneumonic fever, usually beginning with the very inception of the disease and continuing, with more or less frequency and severity, until the inflammatory exudate has been completely removed from the lungs.

This symptom was present in all of seventy cases analyzed by Chomel; in all of Dietl's 750 cases; in 90 per cent of Grisolle's cases and in 95 8 per cent of my series of cases.

It occasionally precedes other symptoms by a few hours, or even several days. In such instances there is usually a premonitory bronchial catarrh. In a few cases the cough may be so slight and insignificant as to escape the notice of the patient and his attendants

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unless their attention has been particularly directed to it. In rare instances it may be quite absent throughout the attack.

Cough is less constantly a symptom in the aged, cachectic and insane than in healthy adults. In such patients a previously existing bronchitic cough may become diminished or entirely suppressed upon the advent of pneumonic fever. This is also true of the paroxysmal cough of pertussis, which is replaced by that charac teristic of pneumonic fever, to again resume its original character when the pneumonic inflammation shall have undergone resolution.

Cough may be delayed in its appearance, in the presence of definite physical signs and pronounced symptoms, for several days—as many as twelve in a case reported by Ray.

With the profound prostration not infrequently attending this malady the cough often diminishes in frequency and power, or ceases altogether. Such cases very seldom recover.

The character of the cough varies somewhat with the age, condition and temperament of the patient and in different epidemics, but, contrary to the opinion held by some it is usually peculiar and quite distinctive of the malady in question. At the beginning of the attack it is dry, frequent, short, restrained and painful. In some cases it is so frequent as to accompany almost every expiration, especially if the inspirations are at all deep. The length of the cough varies with the depth of the inspiration, but the impression produced upon the listener is that it is short and hacking. In children it is often slight and insignificant during the incremental stage of the disease, although many are made very restless and irritable by the constantly recurring and teasing cough. After a few hours the cough becomes moist and is usually accompanied by expectoration. It is however, still short, restrained and painful. Later when the disease is at its height it is less frequent, more open, less painful and the patient does not so persistently attempt its restraint. It can not, however, be, as yet called "free," inasmuch as the inflamed lung is not susceptible of being fully inflated, and sufficient air is not expelled from behind the immovable obstruction to cause a forcible explosion. If the cough is very painful and accompanied by only a scanty expectoration it is apt to be more frequent, less paroxysmal, drier, more restrained, shorter, less severe and in a higher key than when there is a free bronchial flux and but little pain.

In the latter stages of the attack the cough is usually very powerful, paroxysmal and distressing. In children it may even cause vomiting, and sometimes resemble whooping cough. The severity of the cough, however, is no measure of the gravity of the case, for there are many dangerous cases with but little cough and *vice versa*. A severe or paroxysmal cough, coming on at the end of the exudative stage is, although an element of danger, of good import, whilst the same kind of a cough during the height of the fever is of evil augury.

The cough has been known to be so powerful as to cause separation of the sternal epiphyses from the ribs in children and fracture of the ribs and sternum in older persons. Heister, who was probably a little credulous, tells us of a clergyman's wife who coughed her perineum open.

One of my patients, a fragile little girl of 5 years, who had already suffered three fractures of the long bones—the clavicle when a year old, the fibula at three years and the femur six months later—developed a very powerful cough during convalescence from a very severe attack of pneumonic fever, locally affecting the entire left lung. After this had continued for four days my attention was called to a prominence of the sixth rib on the right side in the axillary line. There was evidently a partial fracture of the rib at this point. The bulging was not easily reducible and remained permanent.

In rare cases emphysema of the cellular tissue or mediastinum may follow a severe fit of coughing. A soft crepitating swelling forms on either side of the neck, extends gradually under the skin and becomes general. This accident is most frequent in childhood, adds considerably to the danger, and in case recovery ensues two or three weeks' time is required for the reabsorption of the diffused air.

Rupture of the lung, with pneumothorax, is a possible result in non-destructive local pneumonic processes, although my experience or reading has never included such a case. The breaking down of softened lung tissue so as to form an abscess is a contingency by no means remote. Other effects may follow violent coughing, e.g., sub conjunctival hemorrhage, detachment of the retina, hernia or the strangulation of an existing one, rupture of the diaphragm, aneurism or the rupture of an existing one, etc.; but such accidents are exceedingly rare.

The cough is never hollow or cavernous, as in phthisis, unless cavities are actually present. A cough of ordinary characteristics, which becomes loose and rattling, and afterwards cavernous, is always pathognomonic of abscess.

The characteristics of the cough in this disease had, with the older clinicians, a semiotic value which the discovery and cultivation of the modern methods of physical diagnosis has, unfortunately I believe, sadly depreciated. Nevertheless the clinical importance of this symptom is very great, and its features are deserving of the most careful consideration.

Cough is a modified respiratory act in which a deep inspiration is followed by a forcible expiration, with, for a time, closure of the glottis, so that any substance, solid or liquid, may be expelled from the glottis by the rapid rush of air upon the sudden opening of the glottis toward the latter end of the act. It is caused by irritation of branches of the vagus distributed to the nose, pharynx, larynx, trachea, bronchi, pleura, osophagus, stomach, diaphragm, liver, spleen, ear, etc. In pneumonic fever the cough is due to the irritation from

TABLE SHOWING CASES OF PNEUMONIC FEVER OBSERVED BY WELLS WITH ABSENCE OF COUGH.

Number	Age	Sex.	Previous Condition.	Character of Attack.	Range.			Seat.	Duration.	Result.	Remarks.
					Pulse.	Resp	Temp.				
1	46	M.	Good.	Latent.	80-110	20-26	99.101	L. base.	9	R.	
2	1½	"	"	Masked.	120-160	36-48	102-105	Duplex.	5	D.	Red hepatization. Meninges congested.
3	21	"	Dissipated.	Typhoid.	120-146	26-46	105-105.7	R. base.	17	R.	
4	46	"	Typhoid fever.	Latent.	100-132	26-32	101-103 5	L base.	15	R.	
5	84	F.	Senility.	"	80-90	18-22	98-100	L. entire.	3	D.	Lung disorganized.
6	64	M.	"	"	60-92	24-30	101-103	R base.	22	D.	
7	13	F.	Good.	Acute.	100-120	20-32	102-104.5	L. apex.	6	R.	Coughed twice during convalescence. Menstruating for first time.
8	81	"	Senility.	Latent.	80-110	22-26	101-103	R. apex.	7	R.	
9	82	"	"	"	100-112	24-26	99-100.5	Duplex.	5	R.	Same patient as Case 8.
10	21	M.	Good.	Acute.	100-140	25-40	102-105	R. entire.	10	D.	
11	51	"	Insane.	Latent.	120-160	3 -52	100-104	L. base.	4	D.	Mania. Pericarditis.
12	27	"	Good.	Mild.	60-92	16-22	99-101	"	7	R.	
13	3	F.	Pertussis.	Latent.	100-140	36-48	102-105	Duplex.	9	R.	Cough of pertussis ceased suddenly with advent of pneumonic inflammation, to return on ninth day. Diarrhea. Coma.
14	69	M.	Senility.	"	80-108	18-24	103-103.5	"	4	D.	
15	77	"	"	Low.	100-116	20-28	100-101	L. base.	7	R.	
16	4	F.	Diphtheria.	Mild.	100-130	28 36	99 101	Duplex.	5	R.	Following tracheotomy.
17	57	"	Cachectic.	Latent.	120-160	30-40	101-104	R. base.	2	D.	Cancer of uterus.
18	69	M.	Senility.	"	.....	.....	.....	Duplex.	.....	D.	Sudden death.
19	97	"	"	"	70-92	20-26	102-102.5	R. base.	10	R.	
20	22	"	Idiocy.	"	100-120	20-34	100-103.5	L. base.	7	R.	Following an epileptic fit.
21	37	"	Typhoid.	"	96 112	27-30	101-103	"	6	R.	

the inflammatory products effused upon the surfaces of the pleura and the respiratory tract. It is aggravated by irritation of the neighboring organs and movements of the lungs, and is allayed by rest.

A little girl of 4 years gradually developed a short, incessant and annoying cough. It was so frequent that not five waking minutes passed without her coughing one or more times. When 8 years old she sustained an attack of pneumonic fever, locally affecting the apex of the right lung, which ran an ordinary course and terminated by crisis on the fourth day. During this time her habitual cough was replaced by that characteristic of pneumonic fever, but with the advent of convalescence it again returned. Investigation showed the chronic cough to be due to a large mass of inspissated cerumen in the right auditory meatus, the removal of which instantly and permanently relieved it.

I have long shared the opinion of Juergensen that the very frequent, dry, painful and teasing cough of the early stages of pneumonic fever is very seldom, or never, beneficial, is always disagreeable and frequently detrimental to the patient. It is clear that when fluids accumulate in the bronchi, cough of frequency and force sufficient to expel them is necessary, but when the bronchial secretions are scanty or absent it would be difficult to indicate in what manner a frequent and harassing cough can possibly benefit the sufferer. Not only is such a cough painful and disturbing, but from the insufficient rest which it entails, and the pulmonary excitement occasioned, I am convinced that it is decidedly injurious to the patient.

Expectoration. — Expectoration, like cough, is a symptom which is usually present to a greater or less extent in pneumonic fever, although it is sometimes altogether absent. It is necessarily absent in those cases in which there is no cough, and in those persons, children mainly, who are unable to expectorate. It is also frequently absent in those cases in which the cough is very weak, or infrequent, and in the senile, latent, rheumatic and some other forms of the disease.

It was absent in 5 per cent of Chomel's; 11 per cent of Briquet's; in 7.3 per cent of Dietl's 750 cases; in 16 per cent of Wunderlich's 50 cases; and 6 per cent of my cases. In my own cases I have excluded young children.

Buhl thinks that absence of expectoration is due to the fact that the exudation matter is confined to the air cells and that the finest bronchial tubes remain free

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from inflammatory implication. In every one of my cases, however, the apparent cause was weakness or absence of cough. It has been asserted that expectoration is absent in a larger proportion of cases when the apex is the part of the lung locally affected than when the base is inflamed. It is probable, however, that if such be indeed the fact, other reasons, such as weakness, etc., might be brought forward to account for the phenomenon without attributing it to the local seat of the disease.

Gairdner has advanced the theory that the bronchial tubes act in a manner similar to the bowels and eject their contents by peristalsis. Accepting this theory, which is unsupported by proof, one might readidly suppose that expectoration of bronchial fluids would be more difficult from some parts of the lung than from others.

Absence of expectoration has always been thought to be an unfavorable circumstance in pneumonic fever.

Galen says that the most hopeless cases are those rare ones in which expectoration is absent. Avicenna views this occurrence with alarm. Van Swieten thought the inflamed lung was relieved and cured by the expectoration, and that its absence was one of the most unfortunate symptoms which could occur. Cullen was of the opinion that recovery rarely occurred without expectoration. Absence of expectoration is thought by Jacobi to be an almost inevitably fatal sign.

If the absence of expectoration is due to blunted perception or lack of power to bring up matters in the bronchi it is a symptom of evil import, but if there is no material in the bronchi to be ejected the sign is not unfavorable, but rather the contrary.

Chomel thought that diarrhea often took the place of the bronchial secretion in the cases with no expectoration. In none of these cases in my collection was diarrhea a prominent symptom.

In a considerable number of cases expectoration, although not absent, is present so scantily as to pass unrecognized unless special attention is directed toward it.

In general, expectoration appears a short time after the beginning of the cough, but in some instances it is very late in appearing, perhaps not until resolution has begun. Again, it may be free enough in the beginning of the attack and so continue for a period, to be gradually or suddenly suppressed. This is a very unfavorable symptom, inasmuch as it indicates a dangerous failure of the respiratory reflexes or of muscular power. This is especially the case if the other signs and symptoms indicate the presence of fluids in the air passages, extension of hepatization or increased severity of the general disease. Under such circumstances a speedily fatal termination may be safely predicted. I do not recollect ever having seen a patient recover under these conditions, and this appears to have been the experience of others.

Andral, with others, attributes the fatal issue in these cases to the occurrence of asphyxia from the accumulated secretions, but this is plainly an error. The parts of the lung which furnish these secretions are already practically impermeable to air, and certainly no great harm can come, *per se*, from the blocking up of the bronchi of these parts. Again, when such cases come to the autopsical table, the result fails to support the proposition that the bronchi of the other parts are filled to an extraordinary degree with these matters. Death follows the cause of the suppression, and this cause is a failure of the vital forces of the entire system and not of the lungs alone.

It has been supposed that the expectoration might be diminished or suppressed by profuse purgation, unreasonable bleedings and other perturbating and depressing therapeutic measures.

The expectoration of pneumonic fever in its physical characteristics is quite peculiar to the disease, and is practically pathognomonic. In the beginning it is white, frothy, viscid and often specked or streaked upon the surface with minute quantities of blood. The sputa are transparent or translucent, have no definite shape, float upon water and do not adhere to the sides of the vessel, although they adhere slowly to each other. As the attack progresses the color gradually changes to a rusty tinge, the admixture of air is less and it is not so frothy, it becomes more viscid and the blood, which is present in greater or less quantity and gives the expectoration its color, is very intimately mixed with the other elements present. The sputæ are translucent or opaque, sink or float beneath the surface in water, run together and are so viscid that they not only blend intimately together, but they also adhere so tenaciously to the sides and bottom of the vessel that it may be inverted without the mass flowing out. They also cling closely to the sides of the mouth, teeth and lips, so that the patient is compelled to remove them with a cloth. This is the ordinary and typical expectoration of pneumonic fever after the disease has been fully developed. It usually attains these characteristics in the first days of the disease and retains them until resolution begins. With the decline of the disease the sanguineous elements disappear from the expectoration and it becomes yellowish, creamy, less viscid and heavier than before. The sputa are large, numular, sink in water and adhere together, but they no longer cling to the sides of the cup. The amount of the expectorate is at first small, increasing to a total of from one to six ounces in twenty-four hours at the height of the disease, gradually diminishing afterwards and disappearing entirely before convalescence is completed. It forms only a small part of the exudate to be removed from the air cells. This statement will be more fully appreciated when it is considered that only a small portion of the expectoration comes from the air cells, the major portion being bronchial secretion.

The basis of the pneumonic expectoration is water, albumin, mucus, fat and salts, with which the other more or less adventitious elements are mixed. Water forms from 87.3 per cent to 97.1 per cent of the total quantity.

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The percentage of water in four analyses made by Biermer was 94.5, 87.3, 96.1 and 89.0 respectively. In three analyses made by Renket it was 90.9, 97.I and 97.1 respectively.

The percentage of water to the solids in pneumonic sputa bears a very close relation ta the amount of water in the blood. Albumin forms about 3 per cent of the sputa. It is derived from the alveolar exudation and is met with only after hepatization has begun. The viscidity depends upon the mucus, which is present in about 1 per cent. It is supplied by the inflamed bronchial mucous membrane. The salts constitute about 0.8 per cent of the expectoration, and of these the chlorides form about one half.

According to Bamberger pneumonic sputa contain no alkaline phosphates, while 10 to 14 per cent of the salts of catarrhal expectoration belong to this class. In catarrhal sputa the soda is to the potash as 31:26, but in that of pneumonic fever it is 15:41. Sulphuric acid is present in the two forms of expectoration in the proportion of 3 to 8 respectively. The amount of nitrogen present is absolutely and relatively less than in phthisis.

The expectoration is usually neutral or slightly alkaline, although in rare cases I have found it acid. The acidity, when present, is probably due to the presence of pneumonic acid, which is increased in pneumonic inflammation.

Sugar sometimes exists in the sputa in considerable quantities, due probably to the same causes which account for the saccharine elements in diabetic urine.

Tyrosin has been found in the sputa of at least one pneumonic patient, unaccompanied by jaundice.

Pneumonic expectoration usually has an insipid taste, although it may be sweet from the presence of sugar, bitter from admixture of bile, salty from the presence of the chloride of sodium, especially during resolution, or so acrid as to cause soreness of the pharynx and other mucous surfaces.

The amount of blood contained in the expectoration varies infinitely. Some cases pursue their course with simply a mucus expectoration and unmixed with blood, whilst in others the sputa are so bloody as to be hemoptysical, with every imaginable grade between these extremes. Oxidation of the blood gives to the sputa the various shades of red, brown, yellow, orange, green, etc., through which it passes. The sanguineous element generally appears during the first two days of the attack, although it may be longer delayed, or even remain absent.

Grisolle found that, in 131 cases, blood first made its appearance on the first day in forty-five cases, on the second day in fifty-six cases, and on the third and fourth days in fourteen cases each. Chomel found blood absent in three of 125 cases. An uncolored sputa belongs to the history of certain epidemics, *e g.*, the French epidemic of 1837.

I have not met with any facts implying that the sanguineous elements are found in greater or less abundance in different states of the system, as to the amount and character of the circulating medium present, as in plethora, anemia, chlorosis, etc.

Juergensen, however, is of the opinion that the expectoration is often hemorrhagic in the case of drunkards. Others consider the sanguineous element present in less quantity in the aged than in the adult. In children, also, the expectoration is less bloody than at a later period of life. It is true that in the case of young children we do not see the sputa, except sometimes as it is vomited, yet in almost every case it may be seen in this manner.

Actual hemoptysis in pneumonic fever is rare, although cases of great severity, even to fatality, have been observed.

Peteaux records the case of a robust man, aged 45, who was attacked with pneumonic fever and expectorated on the fourth or fifth day, at one time, a pint of bright blood. At the autopsy, some days later, the ordinary appearances of inflammation of the entire right lung was found, but the point from whence the hemorrhage proceeded eluded discovery.

Hemoptysis may indicate the presence of co-existent tuberculosis or organic cardiac disease. The ancients considered hemorrhagic expectoration as being especially dangerous

Rusty sputa occasionally continue for a long time. Walsh says that it may persist for a fortnight. Fox gives nine days as the limit. Stokes saw a patient in whom it continued for several weeks after the physical signs had disappeared. Andral noticed it continue for nineteen days—nine days after the disappearance of the physical signs. I have seen it continue for a long period in several cases—in one for forty days.

The blood in the pneumonic expectoration is derived from the dilated capillaries ramifying upon the surface of the air cells and the smaller bronchi.

It is the changes by oxidation and disintegration, of the sanguineous elements that causes the peculier and curious colorings sometimes met with in pneumonic sputa.

Of these chromatic changes the green has attracted the greatest curiosity. In the presence of an alkali the coloring matter of the blood splits up into albuminoid and hematin, with a green color resulting. The majority of instances of green sputa are due to this cause, although true biliary expectoration certainly does sometimes occur, as evidenced by the presence of the coloring matter of the bile. It is the presence of this greenish expectoration in some cases which has given "bilious pneumonia" a place in the nosological scale with so many physicians. I am, however, inclined to thiuk, with Juergensen and others, that the term should be abolished from use.

Even blue expectoration has been noticed in at least one case. Sometimes the expectoration is of such color, odor or consistence as to resemble pure, gangrenous matter, the juice of prunes, currant jelly, the lees of wine, the juice of licorice, mucilage, glue, etc. These dark sputa are usually expectorated with greater ease

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and facility than the lighter colored. They have always been considered as being of great import.

A very peculiar sputum, resembling a thick mucilage or glue, colored a brownish red and which escapes in a single sheet when the vessel is inclined, always indicates a dangerous case.

That the various shades of color which the pneumonic expectoration assumes is due to oxidation of the sanguineous elevents, and not from any variation in its original composition, seems proven by the fact that no matter in whatever proportion the blood is mixed with a mucilaginous fluid the pneumonic shades can not be produced.

Under the microscope the blood corpuscles are not closely approximated, but are separated from each other, or are in contact only at their edges. The epithelial cells are often colored the shade of the expectoration, but they remain unaltered in size and shape, although this is unusual. Black pigment is found not infrequently in some geographical localities. There is also seen minute or larger masses of fibrine, derived from the finer ramifications of the bronchial tree, infundibula and air cells. They are firm coagula, enveloped in the mucus of the sputa, are of a whitish yellow color, lightly tinged with red, and adhere closely to the sides of the vessel. They become more easily recognizable when washed, although washing decolorizes them. They are composed entirely of fibrine, and may be dichotomously branched, forming more or less perfect casts of the finer bronchi. During the height of the disease they may be expelled in masses of considerable size, but during its decline they are smaller, more or less disintegrated and are not so easily recognized as being parts of casts of a branched tree. They are met with in the vast majority of cases, but are most abundant in those having a powerful cough as considerable force is required to dislodge them. They were noticed by Tulpius, Reynaud, and others, but Remak first pointed out their true nature. Casts such as those described are found only in pneumonic fever, although in another form they are seen in fibrinous bronchitis.

Spiral and central fibers have also been observed in some cases. When these are accompanied by Leyden's crystals the sputum is said to be characteristic of asthma, but they are observed in other diseases also. The pneumococcus may be demonstrated in some instances by careful manipulation.

Various other microscopical appearances may be observed and will well repay careful study.

Pain.—Pain, like cough and expectoration, is almost always present in peumonic fever.

It was present in all of Gerhard's cases; in 98 per cent of Chomel's cases; in 92 per cent of Doubleday's cases; in 90 per cent of Grisolle's cases, and in 98 per cent of my own cases, excluding young children who were unable to make known the fact.

It generally comes on very early in the attack and rapidly attains its maximum intensity. In rare cases it may precede by a few hours, or even several days, the appearance of other symptoms. In other cases, also rare, pain may be more or less delayed in its appearance, or remain absent.

After attaining its maximum intensity it continues unabated for a few days to gradually decline in severity and cease on the third or fourth day, or at least some time before the end of the attack. This subsidence of the pain is a part of the natural history of the disease and occurs independently of remedies for its relief. In rare cases pain may continue for a long time—even far into convalescence.

The pain may be extensively diffused over the chest or, and this is usually the case, it may be confined to a single circumscribed spot which can be covered by the end of the patient's finger.

This last is an important point in the differentiating this pain from that due to bronchitis. In the latter the patient, in locating the pain, instinctively places his open hand over the painful area, which in pneumonic fever he will inspire deeply, so as to reassure himself as to where the painful spot is situate, and will locate it with the point of the extended finger.

The pain is usually located over the seat of the local inflammation, or on a somewhat lower level. Thus when the apex is affected the pain is referred to the level of the third or fourth rib, or still lower, and if the base is the part inflamed it is often located below the diaphragm. Children very frequently refer the pain to the scrobiculus cordis or abdomen. Even adults not infrequently refer the pain to the pit of the stomach. Although the pain is usually located on the affected side—the neighborhood of the nipple being a favorite spot—yet it may be referred to some point on the opposite side. In case the local inflammation is double the pain is often confined to one side only, as I have repeatedly observed. The pain not infrequently radiates from a central point on the chest towards the shoulders, loins, hips, etc., or it may be confined to these distant localities.

In character the pain varies considerably in different cases and will be described with a variety of adjectives by various patients. Generally it will be denominated a stitch, a lancinating, or a burning pain. In intensity it varies from a mere sense of uneasiness to the most agonizing suffering, but it is almost always quite severe and distressing, especially at the beginning of the attack.

Besides the pain there is noticeable, in most cases, an indescribable but most uncomfortable sensation of thoracic oppression, especially of the affected side, which has been compared to the pressure of a heavy weight, or the compression of a vice. This oppression is probably due to the sanguineous congestion of the lung and the deposition of exudative material in the pulmonary textures. Wittich considers this peculiar oppression pathognomonic of pneumonic fever. This oppression, unlike the acute pain, often continues throughout the entire attack. In many cases, especially

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late in the course of the disease, there is present diffuse thoracic soreness.

The amount and intensity of the pain, oppression and soreness varies in different cases and epidemics and bears no definite relation to the extent and character of the pulmonary lesions. A large proportion of the lungs may be affected with no pain, while a trifling amount of local inflammation may give rise to the most excruciating suffering.

Painful hysterical symptoms may prove very annoying. Davis reports the case of a young lady who had excruciating pains, vacillating from the left side of the chest to the head for several days before pnemonic fever, complicated by endocarditis, could be diagnosed. Twenty-four hours later convulsions, with intense pain, set in, followed by death in twelve hours.

Pain is increased or developed by deep breathing, coughing, talking, sneezing and pressure in the intercostal space over the seat of inflammation, or an upward pressure below the ribs. I have very often elicited pain by such pressure when the patients declared themselves free from this symptom. Early in the attack it is a diagnostic aid of considerable value, but it should not be employed at a later period.

The pain may be associated with cutaneous hyperesthesia. In one of my cases this was so marked that the lightest touch caused the most excruciating suffering.

The actunl seat and cause of the pneumonic pain has not as yet been clearly elucidated. The old and very popular opinion locates it in the inflamed pleura. This theory is rendered weak from the fact that pain is often absent in simple pleurisy and may be present in pneumonic fever without pleural involvement. That the pain is not due to the presence of the exudative material is clear from the fact that it ceases while the pressure remains.

The author is of the opinion, without being able to give any very satisfactory reason for it, that the pain has its origin in, and depends upon inflammation of both the pulmonary and pleural textures, or either separately. He also believes that the pain is due entirely to the pulmonary, is usually more diffused and less acute than that exclusively from the pleural lesions.

Proposed Organization of Medical Journal Publishers.

It gives us pleasure to be informed that there is to be organized a Medical Publishers' Association in Washington during the meeting of the Pan-American Medical Congress, which convenes Sept. 5.

Such an organization if properly formed will not only be a protection and benefit to the Publishers of Medical Journals, but to the advertisers as well. Whilst the Publishers of many of the Medical Journals are also Editors and probably belong to the Association of Editors which meets simultaneously with the American Medical Association, they certainly must recognize that there are matters pertaining to the business and financial interests of the Journals that do not come within the purview of the Editors' Association. We understand the object of the Publishers' Association shall be for the better protection of legitimate advertisers and the Publishers and is not in any way to take the place of or interfere with the work of the Editors' Association. Such being the case the organization of the Publishers' Association should meet with their hearty co operation, and we trust that Editors will take note of this proposed movement. Should they themselves not be Publishers of the Journals they edit, we hope they will advise their Pushlishers of the Meeting to be held in Washington Sept. 5, urging them to be present, and give their co-operation to such an organization as shall be for their mutual protection.

The Hyderabad Chloroform Commissions.—Dr. Patrick Hebir (*Med. Chron., and Indian Med. Gaz.*) has carefully reviewed their work. The first Commission showed that the keystone to the safe administration of chloroform in man and in most of the lower animals is formed by the two principles enunciated in the following terms:

1. With regard to the heart: "The Commission consider that it is impossible for chloroform vapor to kill a dog by acting directly on the heart, and this holds good no matter in what doses or in what manner the anesthesia is induced. Death from primary cardiac failure never took place."

2. Regarding the importance of watching the respiration: "So long as the respiratory mechanism remains uninterrupted, chloroform anesthesia is perfectly safe, but should the respiration be impeded and the elimination of chloroform be thereby interfered with, danger at once arises; in other words, if respiration be kept regular, no danger can arise."

The essential object in view was to show that the principles upon which Syme administered chloroform were sound and reliable. Free admixture of air with the vapor of chloroform, which is insured by using some soft, porous material (as a towel or lint) presenting a large surface; no stint in the quantity of chloroform given; and watching the respiration. He considered that there was never any occasion to feel the pulse or examine the heart, either before or during anesthesia. The second Commission brought out the practical points (a) primary cardiac syncope during chloroformization does not occur; and (b) the maintenance of regularity of the respiration is absolutely indispensable to the safe administration of chloroform. By keeping the respiration regular the force of blood-pressure is kept regular also, as is likewise the action of the heart and the circulation generally. Under these circumstances it would be impossible to administer chloroform in poisonous doses unless it were continued after the occurrence of complete anesthesia. A grand rule to follow in practice is to remove the chloroform and allow the patient to breathe fresh air for a second or two when at all in doubt.

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ABSTRACTS

The Period of Incubation of the Infective Fevers.—The period of incubation of the various infective fevers says the *Medical Record* has been a matter of great discussion, and one concerning which definite conclusions have not been reached. A report on this subject by a committee of the London Clinical Society will be received with much interest.

The material which the report contains was obtained in response to a circular letter issued in 1889 by a committee over which Dr. Broadbent presided. The large mass of documents received was digested by Dr. Dawson Williams, one of the honorary secretaries of the committee. Dr. Williams was at the pains to go through the whole of the reports made by its medical inspectors to the Medical Department of the Local Government Board since 1978, which had been laid open to the inspection of the committee by Sir George Buchanan, one of its members. Many important facts and observations in respect especially to diphtheria, typhoid fever, and scarlet fever, were thus obtained.

The system upon which the summaries were prepared has been to take first those cases in which the exposure the source of infection was for a short time—a few ...inutes or hours—at a known date. These have been made "the basis of the conclusions drawn as to the du-"tion of incubation; while other histories, in which only e date of the commencement or cessation of exposure a source of infection was given, have been used for contributory evidence." The duration of infectiousness is also investigated by the light of the data supplied; and the length of time which a patient who has suffered from the disease should be isolated, the period during which a susceptible person exposed to infection should be quarantined, the liability to the retention of infection in clothes and to its dissemination by milk and water, are also considered.

The conclusions of a committee which has evidently gone over the subject so carefully are of much importance, and deserve to be presented here.

Diphtheria, two to seven days; oftenest two.

Typhoid fever, eight to fourteen days; sometimes twenty-three.

Influenza, one to four days; oftenest three to four.

Measles, seven to eighteen days; oftenest fourteen.

Mumps, two to three weeks; oftenest three weeks.

Rubeola, two to three weeks.

Scarlet fever, one to seven days; oftenest two to four.

Small pox, nine to fifteen days; oftenest twelve.

Further investigations were made with regard to the ne and duration of the infective period.

Diphtheria was found to be infective during the riod of incubation, attacks and convalescence.

Mumps and rubeola are also infective for three or four days before the onset of the parotiditis and appearance of che rash.

The contagiousness of measles speedily disappears, and does not continue in disinfected persons for over three weeks.

Typhoid fever is infectious from the time of onset until two weeks after the fever has gone and convalescence set in.

As is well-known, the contagiousness of scarlet fever varies greatly, but is generally continued a very long time—certainly until desquamation ceases, and sometimes as long as eight weeks.

The figures put forth by the committee of the Clinical Society will doubtless excite some discussion and controversy, but they are based on a large amount of clinical data.

The Therapeutics of Sea-Sickness.—From the *Medical Record* we abstract the following: When we consider the immense aggregrate of human misery for which sea sickness is directly responsible, it is rather remarkable that it has been the subject of so little systematic investigation. There is, indeed, a rather extensive literature bearing upon this malady, as the communication of Dr. Irwin, which appeared in a recent issue witnesses. But although much of general interest has been written, there is little in all this mass that is, viewed from the practical standpoint of the therapeutist, of much real value. The reason for this neglect is probably that the study of sea sickness, except for the physiologist, seems to offer less prospect of brilliant results than does that of other more distinctly defined diseases.

Sea-sickness or kinetia—a term recently applied to all forms of motion sickness—is an essentially transient ailment, seldom outstepping the stage of mere functional derangement, and rarely dangerous to life. It is true that there are on record authenticated cases of death proximately resulting from it, but excepting the extraordinary cases of inanition observed during the longer voyages of former times, there has been reason in almost every instance to attribute the fatal result to some pre-existing organic lesion. In at least one other respect sea-sickness differs from all other ailments, for the conditions which cause it are in themselves harmless, and only disturbing so long as the system remains unaccustomed to them. Consequently, the best remedy —short of absolute cessation of those conditions—is their steady continuance until habit has been established and with it immunity from further disorder. The degree of derangement is influenced by such circumstances as the susceptibility of the individual, the nature of the motion, the fortuitous condition of the weather, and not infrequently the provocative character of the sufferer's surroundings. Its duration rarely exceeds from two to three days, while in the majority of cases the tendency toward recovery shows itself, even when no special treatment has been adopted, within a very few hours of the onset. It naturally follows that

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in estimating the value of remedies there is in this ailment more than ordinary liability to confuse the *post hoc* with the *propter hoc*, and hence the somewhat absurd enthusiasm of the recurrent discoveries of a universal specific. The experiments of these men have, as a rule, been limited to a few voyages, and have probably been conducted upon persons, many of whom were otherwise insusceptible or had already partially acquired physiological exemption.

Nevertheless, it is little creditable to our science, or to the men engaged in practice upon the large passenger steamers, from whom by this time something definite might be expected, that so little is known of the therapeutics of kinetia. It seems to be fairly well established that the initial disturbance is of the special function of equilibration, upon which, no doubt, visual impressions may exercise some influence. It is equally certain that the nausea is of secondary or cerebral causation, and not the direct result of impingement or shaking up of the abdominal or other viscera. No similar disturbance accompanies riding on horseback or other exercise of much more violent character. It seems also to be a universal experience that the remedies which are most helpful may be classed either as sedatives or stimulants—sedatives to the organs responsible for equilibration, or direct stimulants to the stomach whereby this organ is enabled to resist the influence of perverted innervation. The search for a universal specific may be regarded as hopeless, if not absurd; but a systematic study of the special forms of sea-sickness as observed during the short channel passages and during ocean transit, and conducted upon the same scientific lines as would be essential in any similar investigation, may still afford valuable guidance in the treatment of individual cases.

Besides sea-sickness itself, there are other important questions connected with sea-voyaging—such, for instance, as its effect upon the menstrual function and the condition of pregnancy, which was some years ago treated of in an essay by Dr. Irwin—which should be made the subject of continued observation by those who have the opportunity.

Pulmonary Syphilis.—Dr. Chomationas (*American Journal of the Medical Sciences*) has reported the case of a man, twenty seven years old, who two years after an attack of influenza complicated by bronchitis, and followed by hemoptysis, presented great debility, a Hippocratic countenance, intense dyspnea, elevation of temperature, insomnia, anorexia, violent cough, with muco-purulent and blood-streaked expectoration, and profuse night-sweats. On physical examination, no lesion was detected at the apices of the lungs, but over the middle lobes posteriorly there were evidences of consolidation and of a small cavity upon the right. The patient presented tegumentary and osseous evidences of a previous syphilitic infection, and on being interrogated admitted having had a chancre ten years previously, and having had secondary and tertiary symptoms subsequently. Examination of the sputum failed to disclose the presence of tubercle bacilli. A diagnosis of pulmonary gumma was made, and a mixed treatment with inunctions of mercurial ointment and potassium iodide in increasing doses was prescribed. The patient speedily and progressively improved, symptoms and physical signs receded, and at the end of six weeks the patient was dismissed, practically cured.

In differential diagnosis the following considerations are to be borne in mind: (1) The anatomic localization of the lesions in the lungs, tuberculosis being usually situated at the apices, syphilis in the lower lobes; (2) the microscopic examination of the sputum, the tubercle bacillus being absent in cases of syphilis; (3) the history of the patient, personal and family; and (4) the results of anti syphilitic treatment.

The Decreasing Birth Rate.—Dr. J. S. Billings contributes to the June issue of the *Forum* a brief but suggestive article on the decrease of the birth rate in the United States, as shown by the figures of the recent census (*Jour. of the Americ. Med. Assoc.*). The subject is not entirely a new one, but its treatment by so high a medical authority in an article for popular information merits notice. It will probably call some general attention to the subject, and it is well that it has been handled by one who can give a fair statement of the facts with judicious scientific deductions from the same, instead of by a popularizer whose main idea might be to produce a sensational and alarmist article. Dr. Billings, while he sees certain evil tendencies in the causes of this decreased birth rate, does not make them the sole text of his paper, nor does he consider the falling off in the number of births as necessarily an unmixed evil. Even were it altogether an evil, the comparative statistics do not show that this country as a whole is worse off than most other highly civilized nations, and they do show that its birth rate is decidedly above that of some portions of western Europe.

The causes of a decreasing birth rate are very numerous, and some of them are undoubtedly such as can not rightly receive medical commendation or countenance, The underlying cause, however, as any one may see, is the increasing difficulty of the struggle for existence, and the ratio of births to the population may be taken as one of the principal indices of the iniensity of this struggle. Of course, the greater the number of wants the sooner will this difficulty be felt, hence the ratio of births will decline sooner amongst the educated and cultured than in what may be called the lower classes, whose needs are fewer and whose ideals of life are less refined and luxurious. Perhaps, also, physical causes may come in play here; the relations of the sense of hunger to the generic appetite, and the fact that overfeeding reduces fecundity even in the lower animals, are suggestive in this connection. The spread of education and of habits of comfortable if not of luxurious living are therefore enough in themselves to largely account for the facts in this regard, as we find them.

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The fact that the greatest decrease in the birth rate seems to have occurred in the regions where the colored race is most numerous seems a little anomalous to Dr. Billings, and he is inclined to account for it, in part at least, by imperfections in the statistics. These may have existed either in the figures of the late census or that of 1880; in either case the apparent increase might be partially thus accounted for, but it seems not unlikely that the great changes in the conditions in the southern States within the past two or three decades are now having a more decided effect than ever before, and affecting the colored race as much or perhaps even more than the white.

A noteworthy fact pointed out by Dr. Billings is that the present conditions as to population were predicted as long ago as 1843 with a very close approximation to absolute accuracy. Looking to the future a still further decrease in the birth rate may be reasonably expected before population, with its present tendencies, reaches what we may call its regemen or equilibrium. Under present conditions, with the increased knowledge and success of sanitation, the infrequency of wars and general pacific tendency of our civilization, and the gradual filling up of all lands suitable for civilized habitation, a decreasing birth rate would seem to be almost the only protection against the realization of the worst anticipations of the Malthusians. While this is true of the United States, it applies still more forcibly to the overpopulated sections of western Europe, which can not very much longer relieve themselves by sending their surplus population to this country.

Bronchiectasis Successfully Treated by Pneumotomy.—Hofmokl (*Wiener medicin. Presse*), has reported the case of a man, forty-three years old, who for five weeks had complained of slight pain in the right side of the chest, with cough that was most marked at night. There was moderate expectoration, the ejected matters as well as the breath after a short time having a most offensive odor. There was also slight febrile movement. The appetite was impaired, sleep was disturbed, emaciation was apparent. The chest was short, but broad and well arched. Respiration was short, quiet, rhythmical, and principally abdominal. The chest was a little flatter anteriorly and posteriorly on the right than on the left. The respiratory movement appeared to be symmetrical. Vocal fremitus was a little less distinct on the right anteriorly than on the left. The percussion resonance was sonorous on the right side above the clavicle; over the clavicle there was absolute dulness; in the first, second, and third intercostal spaces the resonance was almost entirely wanting, becoming manifest again externally at the mammillary line. Elsewhere the percussion sounds were normal. On auscultation the respiratory murmur was found to be vesicular in the right supra clavicular fossa; of bronchial character in the first and second interspaces near the sternum; elsewhere in the area of impacted resonance indefinite and vesicular. Whispering pectoriloquy could be elicited between the first and second ribs. Isolated dry rales were audible in the area of dulness. The amount of expectoration increased, but no tubercle bacilli could be found in the sputum. A solution of methyl violet injected into the second interspace at once appeared in the sputum. Bronchiectasis was diagnosticated, and ordinary medicinal measures failing to bring relief, pneumotomy was determined upon. The patient being chloroformed, an incision about three and one-half inches long was made in the second intercostal space. With the point of the actual cautery at red heat, the lung was entered through the thickened and adherent layers of the pleura. Less than a drachm of putrid, offensive pus escaped. There was no escape of air. A sound passed a distance of little more than an inch into the depth of the lung. The hemorrhage was insignificant. The wound was drained, packed with gauze, and covered with a protective dressing. The expectoration at once diminished decidedly, and the sputum in a short time lost its offensive odor. In the course of the treatment, air was on coughing expelled through the opening. There was progressive improvement in both the local and the general condition, until recovery ensued.

Rapid Pleural Effusion.—White (London) relates the following case (*Lancet*): The patient had ordinary tubal nephritis together with mitral constriction and regurgitation. On December 16, 36 ounces of fluid were withdrawn from the right chest. Next day there was excruciating pain in this region and 106 ounces were withdrawn (thirty hours after the first tapping). Seventy eight hours later 120 ounces were removed from the same side. On this occasion there was again intense pain and dyspnea and great edema of the neck, probably due to the pressure on the superior vena cava. Thirty hours later 50 ounces were removed.

"It seems to me that the only possible explanation of this extraordinarily rapid accumulation of fluid is that the patient had thrombosis of her large azygos vein before it is joined by that from the left side. It is not against this view that we saw no enlarged superficial veins, for the most important anastomoses between the branches of the azygos veins of the two sides and the large azygos vein and the inferior vena cava are deep-seated in the abdomen, the thorax, and around the spine. Nor is it conclusively against this supposition that no evidence of thrombosis was found post mortem, for the patient did not die till eight weeks afterward, by which time all signs of thrombosis might very well have disappeared. She had the clinical symptoms of thrombosis of her femoral vein only ten days before her death, and yet the vein was at the necropsy found to be patent. I have often observed that when patients have died no evidence has been forthcoming of thrombosis although all the signs of it have been present during life. It seems to me that no other explanation offers itself of this case, in which, supposing the fluid

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collected at a uniform rate, after the first tapping of the right chest that rate was three ounces and a half per hour, after the second one ounce and a half per hour, and after the third about one ounce and a half per hour. It is also quite exceptional for the distention of the chest with fluid to be so rapid as to cause acute pain, and it is no doubt comparable to the severe pain in the calf, felt in acute femoral thrombosis, and, like it, is probably due to the rapid stretching of the parts by the fluid; also it must be very rare for the pressure of the fluid in the superior vena cava to cause edema of the neck."

Amputation in Tetanus.—Ferraton (*Arch. de Med. et de Pharm. Mil.*) relates a case of tetanus secondary to a wound of the right middle finger involving a joint, in which recovery took place after amputation of the finger. The patient was also treated by the method recommended by Verneuil, that is, he was wrapped in cotton wool, and isolated in a warm, silent, darkened room. Symptoms of tetanus had come on twelve days after the accident. Amputation was performed thirty-six hours later, bnt the patient was not free from symptoms for three weeks, during the whole of which time he was kept under the influence of chloral and morphine. Ferraton considers that, in view of the fact that the bacillus of tetanus remains localized in the wound, the general symptoms being produced by a soluble poison, the propriety of local treatment should be very seriously considered in all cases except those which are so severe from the first as to leave no hope of recovery. If the wound be on the finger or toe there should be no hesitation in performing amputation as soon as the first symptoms of tetanus are perceived. If on the limbs thorough cleansing and opening up of the wound may suffice. On the ground that the bacillus can only multiply in the presence of pyogenic organisms, he considers that it will be as effectual to render the wound thoroughly antiseptic as to cauterize. If these means fail, after a proper interval, to be followed by improvement, it will be advisable, if the case be not very acute, to proceed to amputation. Wounds on the trunk or head should be thoroughly opened up, cleansed, and treated with antiseptics.

Bacteria in the Soil at Different Depths.—Some investigations carried out by Dr. Alexander A. Houston, of Edinburgh, respecting the number of bacteria in the soil at different depths from the surface, go to prove that the micro-organisms become less and less abundant as the depth from the surface increases. For example, the average number of germs in a gram of soil examined, which was taken from the surface, was 1,687,799; at a depth of three feet this average fell to 173,807; and at a depth of six feet it was only 410. These figures are interesting, and would tend to show that at certain definite distances from the surface the soil would be sterile.

MEDICAL SOCIETIES

American Medical Association.—We reproduce the following interesting report, taken from the *Medical News*, of the Section on Neurology and Medical Jurisprudence, at the forty-fourth annual meeting, held at Milwaukee, Wis., June 6 and 7:

[CONTINUED].

Dr. M. V. Ball, of Philadelphia, read a paper on

INSANITY AMONG CONVICTS.

He said that when communities recognizd that "every society deserves the criminals it has," they will endeavor to correct the evils that in large part cause crime, and will treat malefactors not with a spirit of vengeance, not with a visitation of justice, not as sinners, but merely as obstructionists whom society must place under restraint or remove to a place where they can be of service instead of hindrance; then only will the penal question reach solution. Present modes of justice are puerile. What would be thought of the suggestion that a chronic maniac should be sent to an insane asylum for a year and then be released unconditionally; then, after he had killed someone, that he should again be sentenced for a definite term of one or more years? The danger to society alone should be considered, and the professional criminal placed in durance vile until cured (if that result is possible), or permanently if incurable, and wholly as a protection to society and irrespective of his sanity or insanity, his moral responsibility or irresponsibility.

Dr. Landon Carter Gray, of New York, read a paper entitled

WHAT SHOULD CONSTITUTE RESPONSIBILITY IN THE MEDICAL SENSE, IN INSANITY?

He pointed out that great injustice is likely to be done io the insane by basing the view of their insanity upon the proposition that if a man is able to understand the nature, quality, and consequences of an act, he is legally responsible for such an act. The question of legal responsibility should be determined, not by laws, but by facts. Medical science has demonstrated that a diseased condition of the brain that gives rise to mental aberration permits of no half-way ground in judging of sanity. Periods of remission cannot reasonably be called "lucid intervals," as is often done. After classifying the types of insanity that have been marked out up to the present time, such as the moods, the presence of hallucinations and of delusions, the coexistence of the neuroses and of organic brain-disease, traumatism from excessive use of narcotics, and the mental disturbances occurring from derangement of the organism induced by disease of non-nervous viscera. Dr. Gray called attention to the fact that in paranoia, mania, and melancholia the reasoning powers and the memory are usually intact, yet the patient has undeniable hallucinations and delusions, under the influence of which he commits acts

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for which he should not be held legally responsible. He cited the case of the paranoiac Dougherty, who imagined himself the beloved of Mary Anderson, and that the world was conspiring to keep him from her, and, in pursuance of this delusion, murdered Dr. Lloyd, of the Flatbush Insane Asylum, and was planning to kill about a dozen public officers whom he believed to be in the conspiracy. Yet he declared himself sane and asserted that he knew the nature, quality, and consequence of his act. He was properly pronounced insane, because his mania was so palpable, although some doubt prevailed in the public mind as to his insanity. The only safe test of the legal and testamentary responsibility of a man lies in an answer to the simple question: Is he insane? If he is, he is not legally responsible, and this question can only be properly decided by competent physicians, not by fine spun theories of lawyers. Common sense must be applied to such cases rather than metaphysical definitions of mental aberration.

Dr. Edware B. Angell, of Rochester, N. Y., read a paper entitled

Double Lesion of the Brain: Cerebral Cyst and Cerebral Tumor.

The post-mortem examination demonstrated an increase in the development of the brain on the right side which had to take up the functions of the disorganized left side.

Dr. James G. Kiernan, of Chicago, referred to a case of right hemiplegia with aphasia in an adult in which, by education, speech was regained, but was lost after a second attack. The autopsy showed that the left speech center had been destroyed in the first attack by hemorrhage, and the second attack destroyed the right.

Dr. J. N. Hall, of Denver, Col., read a paper entitled

Gunnery Developments and the Medical Jurist.

He said that newly introduced explosives are rapidly replacing black powder. He described the two most commonly used of these products—the American wood-powder and the Schultze powder. The staining from wood-powder is much less distinct than that from black powder, and the staining from the Schultze powder is even less marked than that from wood-powder. Neither of the two new powders ignites cloth or blotting paper at so great a distance as does the black powder.

Dr. Harold N. Moyer called attention to the fact that the length of the barrel of the weapon should always be considered in making up tables, and stated that there is always leakage of gases in revolvers. Another interesting point is not only the kind of powder, but also the amount of fulminate in the fixed ammunition, as well as the manner in which it is put into the cartridge, whether fine-grained or practically in a solid mass.

Dr. Frank R. Fry, of St. Louis, read a paper entitled

Sensory Symptoms of Three Syphilitic Cord Cases.

Dr. W. J. Herdman, of Ann Arbor, Mich., read a paper entitled

Lesion of the Right Temporo-Sphenoidal Lobe.

The case reported was at first diagnosticated as one of embolism of the left anterior cerebral artery. The autopsy revealed an extensive hemorroage anterior to and at the lower extremity of the right lateral cornu. Softening followed, involving the hippocampus major at its lower extremity and the anterior extremities of the superior, middle, and inferior temporal convolutions. The assumption was considered justified that as far as any symptoms observed in this case can be justly referred to the lesion in the right temporal lobe, they tend to show that its function is of the same nature for the left side of the body that Ferrier has found the left temporal lobe to be for the right—that is, a cortical center for hearing and taste.

Dr. Charles K. Mills referred to several similar cases, which appeared to demonstrate that the left upper temporal region is most particularly developed for word-sound, and the right has a minor degree of development of the same function and takes on the function of the left in part, but not entirely, in case of the destruction of the former.

Dr. Charles K. Mills and Dr. G E. de Schweinitz, of Philadelphia, presented a paper entitled

Hemianopsia and Certain Symptom Groups in Sub Cortical Lesions.

The first case reported presented right lateral hemianopsia, absence of Wernicke's symptom, dyslexia, temporary right hemiparesis, and Jacksonian epilepsy. In the second case there was right lateral hemianopsia, absence of Wernicke's symptom, dyslexia, right hemiparesis, partial right hemianesthesia, partial word-deafness and word blindness. In the third case there were right lateral hemianopsia, absence of Wernicke's symptom, temporary aphasia, dyslexia, right hemiparesis of spastic type, probably word-blindness. Case four presented left lateral hemianopsia, partial left hemiparaplegia and hemianesthesia, temporary aphasia, epilepsy, Wernicke's symptom. Case five presented lateral hemianopsia, absence of Wernicke's symptom, temporary right hemiplegia, persistent hemianesthesia. Case six presented left lateral hemianopsia, left hemiplegia. Case seven presented right hemianopsia, right hemianesthesia. Case eight presented right lateral hemianopsia, doubtful absence of Wernicke's symptom, slight right hemiparesis. Case nine presented left lateral hemianopsia, absence of Wernicke's symptom at first, paresis of both legs, later right spastic crural monoparesis. Of two cases probably of cortical origin, one presented typical left lateral hemianopsia; and the second, right hemianopsia, with absence of Wernicke's symptom.

Another case was reported of right lateral hemianopsia, followed a year later by left lateral hemianopsia, with absence of Wernicke's symptom, retained macular vision, changes in the color-sense, loss of the sense of location.

A case was also reported that seemed to teach that there may be either functional or organic disturbance of

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the word-symbol center of the same character as that which produces hemianopsia when the half center for general vision is destroyed on one side of the brain.

Dr. Thomas D. Crothers, of Hartford, Conn., read a paper on

AMERICAN INEBRIATE ASYLUMS.

He said that managers of asylums who teach dogmatically the nature of inebriety and its only true remedies are not far along in scientific work, and asylums that claim large percentages of cures from certain means and remedies are not worthy of confidence. Inebriety is the most complex neurosis of modern research. The gold-cure specifics, so called, are followed by an increased number of insane among those who have used the treatment. This was to have been expected, as the more powerful the narcotic used to stop the drink-symptom the more certain are insanity and profound degenerations of the brain-centers to follow. The asylum care and treatment of inebriates began first in this country, and has grown and extended to all civilized nations of the earth. American asylums have developed the disease-theory and the practical character of physical treatment in institutions beyond that of any others in this field. Asylums in the United States represent nearly all stages of development and early growth, from infancy and childhood, with its feeble conceptions and infantile efforts, to the boastful assumption and over confidence of youth, on to the dawning truth of early manhood, when reason and judgment begin to reign. A few of these asylums discern similar great truths, which may be stated with confidence as ideals toward which there is a rapid movement. Inebriate asylums must take the place of jails and station-houses. Inebriate asylums should receive the incurable inebriates and make them self-supporting and build them up physically and mentally. Inebriate hospitals should receive the recent cases and place them in the highest conditions of enforced health and vigor, and thus restore a large number to health and sobriety. Inebriate hospitals should be self-supporting when once established. They should be managed on scientific business principles, like military training-schools. Inebriate hospitals should be built with money raised by taxes on the sale of spirits, on the principle that every business should be obliged to provide for the accidents that grow out of it. The inebriate hospitals of to-day are only in the infancy of their work, contending with great opposition and prejudice, misunderstood, condemned, and working against innumerable obstacles. There is an intense personality in inebriate hospitals. Inebriate hospitals and their work are the great new lands which only a few settlers have reached. They are calling to us to come and occupy and thus help the race on in the great march from the lower to the higher.

Dr. Clark Gapen, of Omaha, Neb., read a paper entitled

LAWYER'S CRITICISMS OF EXPERT TESTIMONY.

He said that as at present conducted the trial of a cause involving a medico-legal question is a mere farce, as compared with the trial of a cause involving a pure question of law. The medical expert should be selected by the court as an advisory, and wholly with reference to his special knowledge of the question involved. Medical jurisprudence should be properly taught in the colleges. The so-called chair of medical jurisprudence usually teaches nothing but the mummery of same text-book of ancient times. The proper way is to give a forecast of the legal experience that the student will encounter in the future. He should be taught to be frank, truthful, direct, plain, and non-technical. Students go forth unequipped in this regard. Another cause of the disrespect of medical expert evidence is the common custom of participating in the trial both as counsel and as witness. The court might properly take testimony as to the qualifications of the expert. A good way would be to have lists handed in by each side and let the court choose from the lists. The expert should avoid invading the province of the jury and giving an opinion in the case. The proper course is to put a hypothetic question for the expert to answer.

The following papers were also read:

Dr. Frank P. Norbury, of Jacksonville, Ill., read a paper on

INSANITY IN THE AGED.

Dr. Harriet C. B. Alexander, of Chicago, read a paper on

ACUTE MENTAL SYMPTOMS IN CHILDREN.

The following officers were elected for the ensuing year:

Chairman—James G. Kiernan, of Chicago.
Vice-Chairman—Landon Carter Gray, of New York.
Secretary—F. P. Norbury, of Jacksonville, Ill.

The Pan-American Medical Congress Excursion to Rome.—It has been definitely determined that the Pan-American Medical Congress excursion to the Eleventh International Medical Congress will sail on the steamship, Werra, from New York, September 9, the day following the adjournment of the Congress at Washington, and will arrive at Genoa September 20, four days before the opening of the Rome meeting. Round trip steamer tickets may be procured for $142.50 for inside rooms, and $150 and upward for outside rooms. Tickets are good for members of the Congress and their families, and may be used at option of holder to return on any steamer of the line from Genoa, or on Saturday steamers from Bremen, or Sunday steamers from Southampton, during the months of October, November, and December. Physicians desiring to avail themselves of this exceptionally low rate should at once become members of the Pan-American Medical Congress by sending the registration fee ($10) to the Treasurer, Dr. A. M. Owen, Evansville, Ind., and informing the Secretary-General, Dr. Charles A. L. Reed, Cincinnati, of their intention to join the excursion. Passage should be secured with-

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out delay, as the trip, involving, as it will, a stop at the Azores and Gibraltar and a sixty hours' sail along the picturesque coasts of Spain, France, and Italy, promises to be very popular. Many prominent European guests of the Pan-American Congress will return on this occasion. The time allowed will afford American physicians an opportunity to not only attend the International Congress and visit Rome, but to extend their journey to the famous sanatoria of South France and the Riviera.

The Treatment of Primary Sciatica by Acupuncture.—Dr. E. Valentine Gibson (*Lancet*) reports that of one hundred consecutive cases treated by acupuncture, fifty-six were cured; thirty two were much improved; ten were improved; while in two cases there was no improvement. This is considered to be a very satisfactory result, considering the chronic nature and the severity of the cases. In addition to the acupuncture, they all used the Buxton thermal water, which has a great reputation for the absorption of inflammatory products. The needle should be single, spear-pointed and about two and a half inches long. It should be inserted directly into the nerve, which will be known by the pain which shoots down the leg. The needle should be immediately withdrawn, as no better results are obtained if they are left *in situ*, and additional pain is likely to be caused. The nerve should be pierced about five times at intervals of a few days, over the parts where there is pain on pressure. Rest is necessarily most essential, as it is in other inflammatory conditions, and a rheumatic or gouty diathesis should be treated by appropriate remedies.

Salophen.—Dr. Karl Osswald (*Deut. Med Woch*) believes that in this remedy, which is a salol in which the poisonous phenol group is replaced by a harmless one—acetylpara-amidophenol—we have a substance which will present all of the advantages, with none of the disadvantages, of the salicylic acid preparations. As decomposition takes place in the small intestine, and as it is with difficulty soluble in cold water and is nearly tasteless, it does not destroy the appetite nor interfere with digestion. In small doses it is nearly entirely excreted by the urine; in larger doses, the excess is found in the feces. It does not cause untoward symptoms, even in a daily dosage of two drachms. It is less effective in the same dose than salicylate of soda, because it contains less salicylic acid. It can be used with advantage in mild cases of articular rheumatism, or as a substitute for the salicylate of soda when the latter drug is not well borne. In patients who present an idiosyncrasy against the salicylate of soda, and especially in debilitated individuals, or who suffer from sensitive stomachs, this drug can be used with advantage. It is useful in neuralgias of all kinds, especially in cephalalgias or hemicranias, in connection with chlorosis and anemia.

NOTES AND ITEMS

Mercurial Inunctions and Sulphur Baths in the Treatment of Syphilis.—Dr. Joseph Dymnecki (*Internationale klinische Rundschau*) presents an argument for the combined use of mercurial inunction and sulphur baths for patients suffering from long-standing syphilis. Although it is argued that the combination of mercury with sulphur is an insoluble one, yet the experience of the writer in treating thousands of cases at the sulphur springs of Busko since 1859 proves that this insolubility of the compound has no unfortunate influence upon the process of cure. The increased tissue change which goes on under the action of the sulphur baths apparently affords the mercury better opportunity to come in contact with the syphilitic poison in the various organs, and thus this combination is favorable for a speedy cure.

Antipyrine in Diseases of the Urinary Organs.—Dr. J. H. Brik (*Therapeutische Blatter*) has found that this drug is a weak antiseptic, as is boric acid, and that it does not directly influence the reaction of the urine, but indirectly, through the nervous system, may render an alkaline or neutral urine acid. It is a useful analgesic in the purely nervous form of nephralgia and in the painful disease of the pelvis and ureters, as inflammations and foreign bodies, etc. It is useful in the motor and sensory neuroses of the bladder, neck of the bladder and prostate, but it is of slight effect in inflammations, new growths, and tuberculosis of these parts. The hyperesthesias and neuralgias of the urethra can be relieved by this drug. The best results are, however, obtained when the prostate or the prostatic urethra are involved. The property which this remedy possesses, similar to that of morphine, of acting upon unstriped muscular fiber, gives its field of usefulness in diseases of the urinary organs. It can be administered by the mouth or hypodermatically, and in this way it is excreted by the kidneys, or by rectal injection or locally by injection into the bladder. If administered at night it is likely to relieve pain and produce rest. If ten to twenty drops of a five to twenty per cent solution are injected into the prostatic urethra, a quite severe burning is apt to follow, which soon passes away, and is replaced by analgesia. This effect may last ten to twelve hours.

The Treatment of Gonorrhea in Women.—Dr. Brose treats acute cases by douches of chloride of zinc or sublimate, the urethra receiving 1 to 5 per cent solutions of nitrate of silver by injection. In local treatment the cervix demands attention, and the application of strong solutions of chloride of zinc (to 50 per cent) has been followed by the best results, although the practice is not without danger. Intra-uterine applications are likely to be followed by salpingitis and

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pelvic peritonitis, and are rarely necessary. Relatively dangerous is the washing out and injection of the uterine cavity with remedies designed to disinfect it; a harmless and proper method is the application of caustic remedies upon a sound wrapped with cotton, or in the form of pencils; or the method of Fritsch may be employed—mechanical dilatation of the uterus and packing the cavity with strips of gauze wet with a 2 per cent solution of nitrate of silver, repeated daily for two weeks. The chronic urethritis is treated through the endoscope by a 5 to 20 per cent solution of nitrate of silver.—*Deutsche Med. Wochenschrift.*

The Antiseptic Value of Phenocoll Hydrochloride.—Dr. Carl Beck (*N. Y. Med. Jour.*) presents a preliminary communication, giving the results of his experiments with—*a*, the pure powder; *b*, 5 per cent watery solution; *c*, 10 and 15 per cent alcoholic solution; *d*, 10 and 20 per cent gauze; *e*, 10 and 20 per cent ointment. The pure powder does not irritate, and the healing process does not differ from that observed under iodoform. Repeated examinations of the urine revealed nothing abnormal. The 5 per cent watery solution was successful in dermatitis, erysipelas, gonorrhea, leucorrhea. The 10 per cent alcoholic solution was injected into the joints of hip and ankle without irritation, but the final result was doubtful. The injection of a watery, and especially of an alcoholic solution, was always followed by a slight, transitory burning sensation. The 20 per cent ointment (preferably made with lanolin) was used for an ulcer of the leg and for burns of the second degree. The granulations were of good character, but the healing process seemed to take longer than it did under the use of the gauze. This remedy is probably as valuable an antiseptic as iodoform, and is stronger than dermatol, aristol, iodol, pyoktanin, or europhen. It probably surpasses iodoform, because—1, it is odorless; 2, it dissolves easily; 3, it does not produce eczema; 4, it is not contra-indicated in kidney disease; 5, on account of its non-poisonous effects it can be applied to very extended surfaces. As a very small amount of the drug fulfils its purpose, the expense is small.

The Treatment of Disease Without Alcohol.—Dr. B. W. Richardson (*The Asclepiad*), after an interval of a quarter of a century, returned to hospital practice at the London Temperance Hospital, taking charge of twenty-five beds. He reports his two hundred cases occurring between April and October, 1892. His mortality was 14.50 per cent, against 11.60 per cent on the medical side for the whole year of 1892, which he explains by the fact of the admission of all urgent medical cases and of many patients *in extremis*. The cases are too briefly reported to indicate their severity, although in variety nothing could be desired. Glycerin was used for making what might be called tinctures; various waters—aqua ferri, chloroformi, opii, quiniæ—were introduced; oxygen gas was used as a medium for carrying other volatile substances that admit of being inhaled with it—ether, ozonic ether, ammonia, amylene, amyl nitrite. He is satisfied that no aid which he could have derived from alcoholic stimulants, as they are called, could have bettered his results. He has acted on the principle of doing unto others as he would they should to him, and feels sure any candid medical brother who will have the steady courage to put aside many old and unproven, though much-practiced methods, based only on unquestioning and unquestioned experience, and to move into these new fields of observation and experience, will, in the end, find no fault with him for leaving a track which, though it be very firmly and be very wide and smooth to traverse, may not, after all, be the surest and soundest path to the golden gate of cure.

Orificial Surgery.—The next annual class for instruction in orificial surgery will assemble in Chicago on the morning of September 4. It will have a four hours' daily session during the week. For particulars address, Dr. E. H. Pratt, R. 56, Central Music Hall, Chicago.

Under Laws of most States the physician is exempted from jury duty, on the ground that his occupation is affected with a public use. In defiance of this principle, more than one city has attempted to exact a license-fee from the physician. Norfolk, Va., furnishes the latest instance of this demagoguery.

The Use of [Mono-] Bromide of Camphor in Vertiginous Epilepsy.—Dr. Bourneville (*Le Progres Medical*) has used this remedy for twenty years in the treatment of epilepsy when vertigo is a frequent complication. Five cases are reported showing the results of administration. The daily dosage is from three to seven capsules, each containing three grains of the remedy. Each week the daily dose is increased by one capsule until the maximum is reached, when the treatment is omitted for a week, to be resumed in the form of a daily dose of three capsules.

The Treatment of Chlorosis by Iron and Some other Drugs.—Dr. Ralph Stockman (*Brit. Med. Jour.*) discusses the absorption, the stimulation, and Bunge's theory. He finds that there is overwhelming evidence that iron, when administered subcutaneously, will cure some forms of anemia without even having had the opportunity of stimulating the alimentary canal or of neutralizing any possible sulphuretted hydrogen in the bowel. If given by this method, it is stored up in the liver chiefly, from which it is slowly excreted into the blood—probably in some organic combination—and no doubt thus subserves the gradual necessities of the organism. The dose is, however, small—one-half grain or less—and recovery is probably more rapid on larger doses given by the mouth. There may be some risk of irritating the kidneys, and no preparation thoroughly satisfactory for hypodermic use has yet been proposed, and thus its exact value is some-

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what difficult to gauge. Sulphite of iron, when administered to two patients, was followed by rapid recovery. In cases treated by the oxide, subnitrate, and salicylate of bismuth no improvement was observed in the condition of the blood until iron was substituted, when recovery took place rapidly. These three series of experiments are strong arguments against the theory of Bunge, that iron is only valuable so far as it absorbs sulphuretted hydrogen from the intestine. Arsenic has been used in chlorosis for many years, but the cases quoted show no reason to suppose that either the red corpuscles or the hemoglobin are increased by its administration. If given with iron, it may be of benefit in so far as it acts as a gastro-intestinal tonic, improving the appetite and digestion, thus indirectly aiding in the cure. Also, by diminishing the demand of the tissues for oxygen, it may decrease the breathlessness of the patient and thus add to her comfort. Manganese has a certain reputation as a hematinic, but in cases treated with the binoxide and sulphate, only the slightest improvement resulted. Hydrochloric acid may improve the digestion, but certainly not the blood condition. Purgatives, of themselves, do not cause improvement until iron is added, and the same is true of purely dietetic treatment, either alone or combined with outdoor exercise or rest in bed.

Caffeine-Chloral in Chronic Constipation.—Professor Ewald, of Berlin, has made use at the Augusta Hospital of a combination of the two drugs named in the heading (*N. Y. Med. Jour.*). He has found it valuable for the treatment of constipation, when the compound is administered subcutaneously He has made use of injections of four or five grains dissolved in water, and he has only failed once in thirteen cases of obtaining, as a result, thin stools; in some of these cases the ordinary drugs and free irrigation had been used without avail.

Ewald has also used the compound in a small number of rheumatic cases that had been resistant to the salicylates. In seven out of eight cases the injection of from three to six grains in twenty-four hours has been followed by reduction of pain and swelling in the affected joints. These injections, according to the information given in the Berlin correspondence of *Notes on New Remedies*, are usually not attended by any pain, although in a few cases there was a slight burning sensation at the point of the injection. The well known, but not very uniform, laxative action of caffeine appears to be intensified by the presence of chloral in the compound. If this is a fact, it would seem to be contradictory of certain experiments on the lower animals that have been reported as showing that caffeine, in the presence of chloral, is almost wholly masked. Urea and cyanogen, in like manner, are said to be masked when given with chloral. However it may be as to the overmastering agency of chloral with other substances than caffeine, it seems to be an indisputable fact that caffeine-chloral has a therapeutic future before it in the treatment of chronic constipation.

RAILROAD NEWS

The Death of Dr. E. W. Harvey.—We regret to learn of the premature death of Dr. Harvey, surgeon of the Chicago and Grand Trunk railroad, Bancroft, Mich., who joined the association last year. Dr. Harvey was a graduate of the Detroit, Mich., Medical College, class of 1877.

Dr. George Ross, chief surgeon of the Richmond & Danville railroad and the "flowery writer" of the National Association of Railway Surgeons, has recently been elected to the position of professor of obstetrics in the college of physicians and surgeons, Richmond, Va. The college is fortunate in securing so able a man to fill this position.

Railway Surgeons of the Pan-American Medical Congress.—It is to be hoped that a large attendance of the members of the National Association of Railway Surgeons may be had at the Pan American medical congress, which will open its session Sept. 5. Members who have promised but who have not yet reported the titles of their papers should do so at once, in order that they may appear on the regular programme.

Special Railroad Rates for the First Pan-American Medical Congress to be held at Washington, D. C, September 5th to 8th Inclusive.—The Chesapeake & Ohio Railway, from Cincinnati or Louisville to Washington, D. C., is the quickest, most picturesque, interesting and comfortable line between those cities. Their trains are vestibuled throughout, lighted by electricity and carry the latest pattern of through first class coaches, Dining-Cars and Sleepers.

The scenery along the upper Ohio and Kanawha Rivers, through the gorgeous and canons of the New River, among the Peaks and Valleys of the Blue Ridge and Alleghaney Ranges and over the fertile plains and historic battle fields of Virginia constitutes a kaledioscopic panorama that for variety, beauty, grandeur and historic interest is unequaled in this country.

Ths rates of fare will be the same by all of the lines and while they have not been agreed upon, they will positively not be more than one and one-third fare for the round trip. The one way rates ars as follows from St. Louis $19.25, Chicago $17.50, Cincinnati $14.00, Indianapolis $16.00, Louisville $16.00.

Tickets will be sold at those places September 1 to 4, inclusive, good to return leaving Washington as late as September 12. Ask for your tickets "via the Chesapeake & Ohio Railway.

If you will advise me what day you will leave any of the places named and whether in the morning or evening and how many berths you will want I will reserve them through to Washington for you.

Write for a copy of "Virginia in Black and White."

E. B. Pope,
Western Passenger Agent, C. & O. Ry., St. Louis.

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MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

VOL XXVIII ST. LOUIS, AUGUST 26, 1893. NO. 9.

ORIGINAL ARTICLES

The Present Status of Surgery.

BY A. H LEVINGS, M.D., MILWAUKEE, WIS.

Read before the Wisconsin State Medical Society, May 3. 1893.

It would not be possible in the time allotted me, were it desirable, to review the entire field of surgery, consequently I have selected such subjects as seen of especial interest at the present time. I ask your attention in the first place to some consideration relative to the technique of cerebral surgery.

Technique of Cerebral Surgery.

In all operations involving the skull the principles of asepsis should be rigidly adhered to. The entire head should be shaved at least one day if possible previous to operation; it should then be thoroughly scrubbed with soap and water, washed with ether and then with a sublimate solution and a sublimate dressing applied. At time of operation the cleansing process should be repeated. Semi-circular flaps including the periosteum are made with the base downwards, thus affording a better blood supply. Hemorrhage from the meningeal vessels may be controlled by passing a ligature of catgut through the dura beneath the vessel and tying. Hemorrhage from the brain is controlled by sponge or gauze pressure, or by passing a catgut ligature through the brain substance including the vessel and tying. Hemorrhage from the accidental opening of a sinus is usually severe and sometimes almost immediately fatal. Manly[11] reports a case of depressed fracture close to the torcular Herophili in which trephining was done; on the removal of the disk and the careful elevation of some depressed fragments an uncontrollable gush of blood occurred and in a few moments the patient was dead. Bullard and Bradford[12] report the accidental opening of the same sinus at the same point with like result.

If the skull is to be removed over a sinus the trephine should be applied to one side, and the sinus separated from the bone with the fingers or some bluut instrument; the bone may then be removed with rongeur forceps. If a sinus has been opened by accident or otherwise the wound should be quickly plugged with strips of gauze, pressure being maintained; or the rent may be seized with hemostatic forceps which should be left on forty-eight hours; or if the rent is small it may be closed by stitches; or the sinus may be double ligated.

After a button of bone has been removed from the skull if the brain bulges strongly into the opening, it is an indication of a pathological increase of the intracranial pressure. It may be due to an internal hydrocephalus, an abscess or a tumor.

If the brain does not pulsate it is indicative of abscess or tumor. The motor centers may be recognized by the use of a common faradic battery, a current of only sufficient strength being used to contract the muscles of the hand or foot. The bone removed should usually be replaced and should be kept during operation in a warm carbolized or sublimate solution. If the operation has been undertaken for headache, insanity or epilepsy, and it is desired to change the intra cranial pressure the bone should not be replaced.

Traumatic intra cranial hemorrhage is a condition worthy of the most careful consideration; if timely diagnosed and properly treated the results are encouraging, but if treated expectantly the majority of patients will die, and those that live will subsequently probably suffer from motor and mental disturbances and perhaps epilepsy. The hemorrhage may be extradural, subdural or cerebral. Extradural hemorrhage nearly always comes from the middle meningeal artery or its branches. It may or may not be associated with fracture of the skull. Usually the traumatism has been considerable; the patient may have been stunned by the blow, but soon regains consciousness to again become unconscious after a longer or shorter period, depending on whether the main artery has been ruptured or some of its branches. If there has been a depressed fracture at the time of the accident the patient may immediately become unconscious and remain so.

In subdural hemorrhage the blood comes from the sylvian or middle cerebral artery or some of its branches. It is probably more often than extradural hemorrhage due to a fractured portion of bone being driven forcibly down upon the brain. Its symptoms are not to be differentiated from extradural hemorrhage.

Cerebral hemorrhage may result from concussion with laceration of the brain substance; its symptoms resemble

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those of apoplexy except as to cause. The condition as a rule is not amenable to operative treatment.

Extradural and subdural hemorrhage attended with pronounced symptoms of cerebral compression should be subjected to operative treatment without delay. The side of the head on which to trephine (unless there is a depressed fracture) must be determined more by the resulting paralysis than by the site of the injury; as it is well known that an injury to one side of the head may lacerate the brain or its membranes on the opposite side. To reach a clot from the anterior branch of the middle meningeal artery, the trephine should be applied one inch and a quarter behind the external angular process of the frontal bone on a line with the upper border of the orbit. Should the anterior branch of the middle meningeal artery be found intact, the posterior branch should be exposed by applying the trephine on the same level as before but one inch posterior to a perpendicular line from the external auditory canal.

The middle cerebral artery which lies in the sylvian fissure may be reached by enlarging the first opening backwards and downwards and incising the dura; the vessel if ruptured should be ligated. A clot when found should be carefully removed, the cavity washed out with sterilized water and drained. In 110 cases of intra-cranial hemorrhage treated by operation 32.7 per cent died, while in 147 cases treated expectantly 89.1 per cent died.[30]

Fractures of the skull.

They are divided into those of the vault and those at the base. Also into simple fissured fractures, compound, comminuted and depressed fracture. They are of especial importance on account of the liability to injury of the brain and its membranes, to infection, and to a point of irritation being established in consequence of a depressed fracture, remaining clot, the formation of fibrous cicatricial tissue or cystic tumor, leading to epilepsy or insanity. The following principles of treatment are well established: Simple fissured fracture without depression and with only slight cerebral symptoms which are abating should be treated expectantly.

Simple fracture producing marked symptoms such as paralysis or irritation should be trephined. In compound fissured fracture every effort should be made to render the wound aseptic; badly contused soft parts are cut away with scissors. The edges of the fissure should be removed with the chisel, and the fissure thoroughly cleaned in order to remove every particle of material capable of causing infection. The wound should be drained.

Depressed fracture, whether simple or compound, if the depression is at all marked, should be trephined without delay. Portions of bone depressed and buttons of bone removed should as far as possible be replaced. A curious case is related by Cheyne.[8]

A boy, four years of age, had fallen fifteen feet striking the left side of his head. For three days he suffered from vomiting, loss of appetite, constipation and pain in the head, when twitching of the eyes and hands appeared. The right pupil was dilated, the left normal. The twitching affected the left side of the face and the left hand and arm—the leg slightly. Sometimes the right arm and leg were involved. Trephining was performed at seat of injury, and a fractured and depressed portion of bone raised, after which the twitchings were relieved, but there was for a time motor paralysis of the left arm and leg. No explanation of the twitchings and paralysis on the side corresponding to the injury was apparent.

In fractures at the base of the skull, better results have recently been attained than formerly on account of the antiseptic treatment of the various cavities into which the fracture may have extended. If a fracture has extended into the ear this cavity should be freely douched with an antiseptic solution and closed with absorbent cotton, a thick sublimate dressing being applied. The same principles should be carried out in the treatment of fractures into the nasal and orbital cavities.

The general treatment in fractures of the skull is important. Such as absolute quiet, a proper alimentation, attention to the bladder and bowels, and at times the ice cap to the head.

Intra-Cranial Suppuration.

The collection of pus may be either extradural, subdural, cerebral or cerebellar. Abscesses are but seldom situated in the ganglia at the base, in the pons or medulla. The cerebrum is affected four times as often as the cerebellum.

Suppurative ear disease, traumatism of the skull and suppuration in some part of the body remote from the head cause three-fourths of all brain abscesses. They are usually single if due to ear disease or traumatism of the skull, but if caused by suppurative foci distant from the head they are in more than one half of the cases multiple.

The symptoms briefly stated are fever with occasional rigors, although the temperature may be normal or subnormal, anorexia, debility, vomiting. Headache is nearly always present and is severe; it may be localized or general, The pulse is frequently slow, the Cheyne-Stoke respiration may be present as also delirium and later coma. Optic neuritis is frequent.

If the abscess involves the motor region there will be either local or general convulsions from irritation, or paralysis from compression. An abscess situated in the cerebellum may lead to dizziness and in-coordination. One situated in the frontal lobe or in the temporo-sphenoidal lobe may produce no localizing symptoms.

An abscess of the brain due to ear disease is, as a rule, situated in the temporo-sphenoidal lobe and is reached dy applying the trephine one inch and a quarter behind and the same distance above the external auditory meatus. The dura, when the button of bone has been removed, is opened by a crucial incision and the temporo-sphenoidal lobe explored, preferably with a grooved director which is thrust into the brain in a direction

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forward, downward and inward towards the opposite ala of the nose. If the adscess is reached the opening may be enlarged with the knife or a pair of forceps. The abscess cavity should be carefully curretted, irrigated with a boracic acid solution and drained. Suppurative ear disease is sometimes the cause of cerebellar abscesses which are usually situated in close proximity to the petrous bone. They are difficult of access and great care must be exercised in opening them not to injure the lateral sinus. The opening in the skull is made one inch and a half behind the external auditory canal and below a line running from the auditory canal to the external occipital protuberance. The bone is thin in this situation and the chisel or gouge should be used in preference to the trephine. In abscesses with localizing symptoms, that is producing convulsions or paralysis, the site of the operation must be in accordance with the principles of cerebral localization.

In this connection septic inflammation of the lateral sinus with thrombosis may be considered. It is, as a rule, the result of a chronic otorrhea. The proximity of the lateral sinus to any suppurative process that may take place in the middle ear or in the mastoid, from which it receives a vein, as well as to the fact that the superior petrosal sinus directly overlies the petrous portion of the temyoral bone and discharges into the lateral sinus is sufficient explanation for the occasianal extension of septic inflammation from the middle ear or mastoid to the lateral sinus.

In inflammation of the sinus there will be severe pain with local tenderness, a high fluctuating fever with chills. Should the inflammation extend into the internal jugular as it usually does the vein will be hard, tense and very tender. The treatment should be immediate, and operative. The sinus may be reached by trephining one and one eighth inches behind the external meatus on a line with its upper border. If pus is found about the sinus it should be washed out. If the sinus is thrombosed it must be opened and made as aseptic as possible. It may be previously ligated. If there is much hemorrhage it is controlled by pressure with strips of gauze. If the internal jugular is thrombosed it should be exposed by incision, ligated below the thrombus, opened and well washed out, and the cavities drained.

Cerebral Tumors.

Of 637 cases tabulated by Gowers as to location 297 were situated in the cerebrum, 179 in the cerebellum, 59 in the pons, 48 in the central ganglia, 31 in the medulla oblongata, 13 in the corpora quadridgemina, and 10 in the crura cerebri. According to the same authority, tubercular and sarcomatous tumors (including the glicoma) constitute four-fifths of the non-syphilitic tumors of the brain.

Headache is the most frequent and perhaps the most important symptom, it is usually constant and often severe; it may be local or diffused. Optic neuritis is usually present, vomiting, vertigo and as terminal symptoms stupor and coma. The motor disturbances are hemiplegia or partial hemiplegia, paralysis of cranial nerves, local spasm or general convulsion.

Syphilitic tumors are usually amenable to medication, iodide of potash or mercury. The symptoms from tubercular tumors are often much improved by cod liver oil and iron, good food and fresh air.

Operation.

Macewen in 1883[13] successfully removed a syphilitic tumor from the brain. In 1885, Hughes, Bennett and Godlee[21] report the removal of a cerebral tumor by them in 1884. In 1890, Horsley[14] reports 44 cases of brain surgery by himself. These men may be considered the pioneers in this branch, and to them probably more than to any one else is due the credit for the present advanced position of brain surgery.

Before any operation is undertaken the most painstaking consideration should be given to all the symptoms in order that an exact diagnosis may be made. We must not only know that a tumor exists but must know its location. As far as possible its size, its nature, whether it is single or multiple, cortical or sub-cortical. To determine this a thorough knowledge of the physiology and pathology of the brain is necessary, a knowledge of its motor and sensory regions, and its latent zones, as well as a careful consideration of the diseases from which the patient has suffered or is suffering.

Horsley gives a hypodermic injection of morphine one hour before the operation to contract the arterioles of the brain. He uses chloroform as an anesthetic. The usual scalp incision is in the form of a curve or semi-circle. To expose the brain the majority of English and American surgeons use the trephine while many Germans use the chisel and mallet. The trephine should have a diameter of one and a half inches. If a very large opening is desired the trephine may be applied at each end of the scalp wound, and the intervening portion of bone removed either with a Hey's saw or the rongeur forceps. The incision in the dura is semicircular, drawing aside or ligating all arteries. If it is necessary to incise the brain it should be done perpendicular to its surface and with a clean cut. The tumor enucleated with the fingers or blunt instruments aided if necessary with scissors or curette. The hemorrhage is controlled by sponge or gauze pressure, by ligature or forceps. After removal of the tumors and the suppression of hemorrhage the dura is united with fine catgut sutures, provision being made for drainage. Portions of bone removed may be replaced if the dura is intact. Where portions of the dura have been removed Keen recommends replacing it with a piece of the pericranium from the under surface of the scalp, turning its osteogenetic layer upwards, and attaching it to the dura by a few sutures. In closing the scalp wound provision is made for drainage—the tube being removed after twenty-four hours. If fluid collects betneath the scalp, the wound may be slightly opened or the fluid drawn off with a hypodermic syringe. Hernia cerebri, should

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it occur, is controlled by pressure, or this failing the protruding mass is shaved off and pressure again applied. Absolute quiet is maintained after operation, the head elevated and ice applied if thought necessary.

The mortality thus far following operations on cerebral tumors has been about thirty-three per cent. Considering that these tumors (excepting the syphilitic) without operation are almost of necessity fatal, the result of operative treatment is thus far most encouraging.

The Operative Treatment of Epilepsy.

In a surgical sense epilepsy has been divided into traumatic, Jacksonian, focal and reflex.

The propriety of excising a sensitive scalp cicatrix or a fractured and depressed portion of the skull in cases of epilepsy where they may be considered causative is no longer called in question. In Jacksenian epilepsy there is spasm of a certain limited group of muscles without loss of consciousness. The excision of the motor center for these muscles has been followed in a number of cases by a cure. There is, however, usually a subsequent paresis of the muscles.

In focal epilepsy in which there has been no previous trauma, the attack commencing in a certain set of muscles and then becoming general with loss of consciousness, the excision of the motor area for the muscles in which the spasm commenced has also been followed by success in a number of cases.

Supposed Reflex Epilepsy.—W. Alexander in 1861 reported 35 cases in which he ligated the vertebral tery with the result of curing 8 and benefiting 11. Rudolph Jaksch[20] reports two cases commencing with pression at the stomach in which he resected a portion of the vertebral artery and the cervical sympathetic ganglia, both cases were cured. Jaksch holds that these cases are reflex from the stomach and that the cure is fected more in consequence of interrupting the sympathetic, than in ligating the artery. Other surgeons have not been so fortunate with the operation. It is ifficult and its propriety doubtful.

Two cases are appended, one reported by Lane[21] in which a groove three and one-fourth inches long on the right side of the skull remained as the result of pressure from the obstetric forceps. Epilepsy developed at the age of fourteen years, two yearrs subsequently the depressed bone was removed; very decided improvement followed.

An interesting case is reported by Cant.[2] A man, aged twenty-four, was kicked by a horse in the temple. Six days afterwards he had two fits and the day following his admission to hospital he had eight attacks. They began with twitchings in the left side of the mouth, the spasm extending to the left hand. The attacks continued for two weeks when he was trephined over the motor area for the facial muscles two and one-fourth inches behind and two and one half inches above the external angular process. The bone being removed the dura bulged into the opening, it was incised and a quantity of yellowish serum escaped, two small blood clots were seen under the pia and were removed. The patient made a perfect recovery.

Microcephalus.

A microcephalon is one having an abnormally small head. According to Broca, one having a skull with an antero-posterior diameter of not more that 148 mm. The condition is usually congenital and associated with premature closure of the fontanelles by ossification, a want of development of the brain and a feeble mind. To overcome the condition of premature ossification and to give the brain room for growth and expansion Lannelongue[6] has devised the operation known as linear craniectomy, which consists in the removal of a long narrow strip of the skull. The location and direction of the incision may be varied but is usually placed antero-posteriorly parallel to, and slightly removed from the longitudinal sinus. Commencing in front at the border of the hair the incision is carried directly backwards to the occiput. The tissues are divided down to the cone, the periosteum being reflected with the scalp, a small trephine is applied at one extremity of the incision and a button of bone removed. With the rongeur forceps a strip of the skull is then resected corresponding in length with the superficial incision and being in width from one-fourth to three-fourths of an inch. Lannelogue does not resect a corresponding strip of periosteum and only punctures the dura when pachymengitis exists; he reports 25 cases operated on. One patient died in forty-eight hours; all the others recovered from the operation and most of them showed marked improvement.

Ransohoff[6] reports the case of a girl, aged three years and seven months, on whom linear craniectomy was performed by him for microcephalus. The result was most gratifying as noted three and a half months after operation. The division of the skull was carried from the lambdoid suture within one-half inch of the orbit and was three-eights of an inch wide and six inches long; a strip of periosteum corresponding to the slit made in the bone was removed. At the date of the report the bi-parietal diameter had increased from four and six-eights inches to five inches, the bi frontal from three inches to three and three-eighths, the measurements across the vertex from one ear to the other from nine and one-fourth to nine and three-fourths inches.

Auger[7] reports a case on which linear craniectomy was performed on a girl of eight years. The child had made no progress mentally since her eighteenth month. had no language, no idea of propriety, or of avoiding danger. The opening made in the skull measured eleven and a half centimeters in length by four centimeters in width. The next day after operation the child no longer soiled the bed, in a few days asked for food and cried for her father and brother. The improvement continued while she was kept under observation.

A case is reported by Maunoury[10] in which linear craniecfomy was done on a girl four years of age. The

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result seemed to be perfect, but the improvement lasted only three or four months when the child relapsed into her former condition of idiocy.

In 45 cases operated on, 9 died. Nevertheless when we consider the deplorable condition of these patients without operation the results thus far attained are most encouraging and warrant further trials.

Spinal Abscesses.

It is now generally admitted that spinal abscesses with few exceptions are of tubercular origin, and the principle is well established that the sooner they are dealt with surgically the better. Excellent results have been obtained by tapping and injecting the cavity with iodoform emulsion.

Treves[23] reports a number of cases of psoas abscesses treated by incision through the loin, at the external border of the erector spinæ. This affords excellent drainage and gives easy access to carious or necrosed bone. After opening the abscess it is thoroughly irrigated and as much of its lining membrane removed as possible with the finger or a sponge on a long holder; the cavity is again irrigated and dried, and the wound closed with deep sutures without drainage. Sometimes the abscess will refill, and the process has to be repeated, but he states that he has never found it necessary to repeat it a third time. His results have been most excellent.

Lane (*British Medical Journal*) reports two interesting cases of spinal abscess. One, in a boy aged sixteen, who was hurt by a fall three years previously. The deformity affected the fifth dorsal. On removing the spinæ and laminæ of the fourth, fifth and sixth vertebræ the cord was found spread over a tense abscess wall, which was opened giving exit to caseous matter and large fragments of bone. The wound healed rapidly and motion and sensation were regained, but motion was lost again. A second operation was therefore performed and a quantity of caseous material surrounding the cord removed, without, however, affording any benefit. In a second case a girl aged 21 had injured her back by a fall four years previously. Eighteen months afterwards the spine of the tenth dorsal vertebra became displaced forward and the right knee joint became swollen and painful; sensation and motion were lost in both lower limbs. On removal of the spinous processes and laminæ of the ninth, tenth and eleventh vertebræ the cord was found strongly compressed between the body of the tenth and the lamina of the eleventh. Improvement ensued. Four weeks later the right knee joint was excised. Paraplegia recurred and the cord was exposed a second time. It was stretched over a tense abscess after the evacuation of which complete recovery took place. He reports all cases of laminectomy for compression paraplegia the result of caries and urges that every such case should be subjected to operation. His views are however considered extreme by many good surgeons.

Fractures of the Spine.

The vertebræ most frequently broken are the fifth and sixth cervical, the twelfth dorsal and the first lumbar.

Fractures of the arches occur in about one half of cervical fractures, in one seventh of dorsal and in one eighth of those affecting the lumbar vertebræ. In 81 cases of resection of the spine for fracture and luxation White found a record of fracture of the laminæ or arches in forty-five per cent. The most common causes of fracture of the spine are forced flexion, falls on the feet, buttocks or occiput. In fractures of the spine there is usually great injury to the soft parts muscles and ligaments, but of most importance is the injury to the spinal cord causing paralysis of the parts below the seat of injury.

The deformity is due to the portion of spine above the seat of fracture falling forward and downward, the paralysis to the compression of the cord between the laminæ of the vertebræ above, and the body of the broken vertebra below. In fractures of the spine efforts should be immediately made to reduce the fracture by extension and manipulation. Great caution is especially necessary in fractures of the cervical region not to produce fatal pressure on the cord. If the parts have been replaced some retentive apparatus should be applied such as sandbags and jury mast in fracture of the neck, and plaster of paris jacket in fracture of the dorsal region.

The tendency of modern surgery is towards operative procedure in cases where the deformity cannot be rectified by extension and manipulation. If the crushing force has been such that the probabilities are the cord is irreparably injured operation is contra-indicated.

Laeinectomy.—The removal of the arches and spinous processes for the purpose of taking pressure off the cord, and giving opportunity for examination for hemorrhage or inflammatory products is now a well recognized procedure. The operation consists in making a long straight incision directly over the spinous processes, its center being over the fractured part reflecting the muscles from the spinous processes and laminæ, the periosteum from the arches, cutting away the spinous processes and dividing the arches as near the transverse processes as possible. Nothing would seem to be more reasonable than that an arch that is producing injurious pressure on the cord should be removed, especially as experience has shown that the removal of the arches does not materially weaken the spine. The results thus far have been encouraging.

The Surgery of Gall Stones.

Gall stones may be situated either in the gall bladder, cystic or common duct, or in any two of these situations combined; rarely, if ever, have they been found in all three at the same time.

A gall stone impacted in the common duct will produce a more or less permanent icterus, one impacted in the cystic duct a tumor of the gall bladder, while stones in the gall bladder may produce neither tumor nor icterus. It is well known, however, that the irritation and

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inflammation caused by gall stones in the gallbladder may spread to the common duct and produce temporary occlusion and transient jaundice. The same result may follow the passage of a gall stone.

If the cystic duct is open the gall bladder will contain bile, if it is occluded it will contain either serum or mucus, possibly pus. When stones exist in the gall bladder the cystic duct is usually closed in consequence of inflammatory swelling. If the stones are removed the swelling rapidly subsides. The cystic and common ducts are rarely obliterated. The colic in cases of gall stones is due either to the impaction or passage of gall stones or to inflammation of the gall bladder, the latter is probably the most frequent. An inflamed gall bladder will contract adhesion first to the omentum, second to the transverse colon, and third (should the stones penetrate the ducts) to the stomach and duodenum.

If the common duct is obstructed the liver will be enlarged. Riedel speaks of a tongue-like process projecting from the right lobe of the liver which sometimes reaches down as low as the navel. It is of diagnostic value in supposed gall stones.

Gall stones are more frequent in women than in men and in women those who have borne children seem especially liable. In 56 cases operated on by Riedel there were only 6 men and in 25 cases operated by Hans Kehr there was but one man.

In incipient cases of gall stone disease where it may reasonably be supposed that the gall stones are small, as well as in cases where stones have been passed, and the symptoms indicated that there are still others in the gall bladder, mineral waters, alkalies and cathartics are indicated with the hope of washing out the gall stones through the ducts into the intestines. It is possible for a gall stone of about one-third of an inch in diameter to pass the ducts.

An operation is indicated in cases of continuous colicky pain in the gall bladder without evidence of the passage of gall stones. In these cases it is probable that the stones are too large to pass the ducts. Operation is indicated by gall stones that are producing a continued feeling of heaviness at the stomach and invalidism without colic; in these cases there is an open cystic duct. Operation is indicated in continued obstructive icterus. In such a case the probabilities are that a stone is impacted in the common duct. Operation is indicated in all suppurative processes of the gall bladder or ducts, and in cases where colic and icterus have appeared together and continued for a time, the icterus finally disappearing while the colic recurs. In these cases there will be found gall stones in the gall bladder (Riedel).

Riedel advises early operation. He says the surgeon should be called "at the beginning not at the end of the tragedy".

Operative Methods.

Cholecystostomy or the formation of a temporary fistula in the gall bladder is practiced by Riedel[23] Hahn Sonnenburg, Hans Kehr[24], Kummell[25], Lindner[26] and V. Winiwarter[27].

In cases without icterus a short transverse incision two or 3 inches long is made over the gall bladder which is gently drawn into the abdominal wound and sutured to the abdominal parietes. The operation may be completed at one sitting by incising its walls and extracting the stones, or the incision may be delayed until adhesions have formed (from two to ten days). Some surgeons aspirate and incise the gall bladder before suturing it in the abdominal wound. The advantages claimed for this operation are its freedom from danger, that it guards against leaving gall stones in hidden pockets or diverticulæ, necessitating a second operation. That gall stones impacted in the cystic duct are likely to work their way back into the gall bladder after drainage, or may be removed from the cystic duct through the fistular opening; and finally that the gall bladder and ducts take on healthy action much more readily when drained than when not.

Korte[31] and Czerny limit drainage of the gall bladder to cases in which there is either empyema, pronounced disease of its walls or closure of the ducts.

Ideal Cholecystotomy or closure of the incision in the gall bladder by suture after removing the gall stones in uncomplicated cases is practiced by Czerny, Korte, Socin, Langenbuch, Roux[28], Winkelman[24] and others.

Courvoisier[27] holds that the regular operation should be cystectomy, or removal of the gall bladder, in cases where this is not advisable he would perform the ideal cystotomy.

Cholecyst-enterostomy or the formation of a fistular opening between the gall bladder and duodenum in cases of closure of the common duct has been practiced with success by a number of surgeons.

Adhesions between the gall bladder and adjacent organs should be dealt with at the time of operation, as they are liable to cause much functional disturbance after all gall stones have been removed. The greatest caution, however, is necessary in dealing with these adhesions. Hans Kehr relates a case in which on incising an adhesion he opened both the gall bladder and duodenum, a fistulous opening having been formed between them, and Riedel relates a case where he opened the gall bladder, stomach and transverse colon.

The following conclusions may be drawn: Excision of the gall bladder is only indicated in cancer or tumor of the gall-bladder or where its walls are so diseased that they cannot be sutured. The formation of a fistular opening between the gall-bladder and duodenum is indicated in cases where the permeability of the natural passages cannot be re-established. Gall-stones impacted in the common or cystic duct should be removed if possible at time of operation.

The ideal cholecystotomy may be practiced where the walls of the gall bladder are healthy and where it is perfectly evident that the ducts are unobstructed.

The formation of a temporary fistular opening between the gall-bladder and parietal wound is the safest

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and best operation yet devised for gall-stones in the gall-bladder.

Laparotomy for Tubercular Peritonitis.

Tuberculosis may primarily affect the peritoneum and be confined to it as a localized inflammation, or it may be a part of a general systemic affection, or be secondary to pulmonary tuberculosis or to tuberculosis of the genito-urinary tract.

The forms of tubercular peritonitis classified according to the exudate, are the adhesive, the fibrino-plastic and the ascitic. In the adhesive form the exudate is small in amount, plastic in character and tends to cicatrization.

In the fibrino plastic form there is a free exudate of gelatinous fibrin binding together the various peritoneal surfaces which are studded over with miliary tubercles.

In the ascitic form (which is of great interest to the surgeon as it is most amenable to operative treatment) the peritoneum is thickened and studded with masses of tubercles. The effusion may be general, occupying the whole peritoneal cavity, or encysted. The fluid may be either clear, containing floculi or turbid. Ascites due to tuberculosis should be differentiated from ascites caused by valvular heart disease, cirrhosis of the liver and malignant disease of the omentum and peritoneum.

Aldibert[1] has collected 46 cases of peritoneal tuberculosis in children treated by operation of which number 4 died and 42 are recorded as cured; of the latter 9 remained well after one year and 2 under two years. None of the deaths were immediately due to the operation, a subsequent improvement always having taken place. If account is taken only of those cases proven to have been tubercular by microscopical examination, there are 18 cases, one third of which remained well after one year.

In a case reported by LeBec where death occurred from other causes, one year and a half after operation for tubercular peritonitis, the peritoneum was found absolutely healthy.

Koenig[2-3] has collected 131 cases of laparotomy for tubercular peritonitis, seventy per cent of the patients were over twenty years of age, 107 of the above cases were much improved by operation. Some remained well for lengthy periods, viz., twenty five, thirteen, nine, eight and seven years. Koenig states that laparotomy will cure one-fourth of all cases. Kuemmel regards primary localized tubercular peritonitis curable in the same sense, and to the same extent, as tuberculosis of joints.

How does laparotomy cure tubercular peritonitis?

Van de Warker thinks that the ascitic fluid is harmful in two ways. First through its mechanical irritation by pressure, or by some irritating substance held in solution, and secondly by acting as a medium for the propagation and distribution of the tubercular bacilli. The ascitic fluid being being withdrawn the peritoneum is put at rest and by a process of thickening and induration may incapsulate the tubercles. Koenig thinks the cure is effected by suppression of the peritoneal cavity, the peritoneal surfaces falling together and becoming adherent. The tubercles are walled in by effused lymph adherent intestine and omentum. Established, but not advanced pulmonary tuberculosis is an indication for not against the operation, as the improvement gained enablss the patient to better resist the phthisis (Parker Syms).[14]

The abdomen is opened through a long incision between the umbilicus and pubes, the ascitic fluid drained off, and the cavity thoroughly flushed with boiled water, or with a boracic acid solution. Especial care should be given to washing out all tubercular and pseudo-membranous debris. The cavity may then be dried and lightly dusted with iodoform.

Surgeons are not agreed as to the propriety of drainage, some holding that it is not advisable on account of the liability to the formation of a fistulous tract, while others hold that drainage should be maintained as long as fluid escapes. It would seem to the writer that the Mikulicz drain was especially appropriate in these cases.

The Arterial System.

The investigations of Ballance and Edmunds on "Ligation in Continuity" is deserving of special consideration. The following is a brief resume of their conclusions.

The closure of a vessel after ligation is affected through the proliferation of connective tissue cells from the intima, producing scar tissue and either converting the vessel into a fibrous cord or merely forming a rim of connective tissue at the site of the ligature. The clot takes no active part in the constructive process by which the artery is obliterated. The clot, however, has three functions:

1. It acts as a buffer between the blood current and the ligature.
2. It affords a support for the plasma cells as they connect the two sides of the vessel.
3. It affords nourishment for the plasma cells.

In ligation, if the walls of the vessel are not injured by rupture, the nearness of a large collateral branch is of small moment.

The conduct of the arterial coats after ligation will depend partly on whether suppuration occurs, partly on whether the coats are ruptured, and partly on the absorbability of the ligature. If suppuration occurs a silk ligature will work its way across the vessel and be discharged, the artery being divided.

If, however, an absorbable ligature such as chromic catgut be used and the coats be uninjured, the continuity of the wall of the vessel will be maintained. If the ligature be of tendon the artery will be permanently closed, but if of carbolic catgut it may disappear so rapidly that the artery will become patent and the circulation through it re-established.

When suppuration does not occur, the fate of the vessel will depend on whether the coats are ruptured or not. If the coats are ruptured the adventitia in the

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loop of the ligature may be absorbed, the vessel being thus completely divided. This will depend upon the rate of absorption of the ligature.

A carbolized catgut ligature, even where the coats are ruptured if the wound is aseptic, will not destroy the adventitia. If suppuration does not occur and the coats are not ruptured the continuity of the vessel is maintained, not only is the vessel not injured by the ligation but it is strengthened by the new tissue which is thrown around it. The arterial wall is strongest at the point where it is strengthened by a scaffolding of ligature and young connective tissue.

To maintain intact the continuity of the vessel then two things are clearly indicated, that the coats be not ruptured and that the wound be aseptic; if these condi tions be complied with there is no danger of hemor hage. The endothelial coats of arteries adhere with lit tle protection. Ziegler likens the interior of the blood vessels to that of serous membranes, and the intimal growth after ligation to the plastic inflammation of a serous membrane.

In an aseptic wound a chromic catgut ligature will hold an artery for a month or more, kangaroo tendon for two months, silk for a longer period, and silk worm gut will remain sufficient much longer even than silk.

The causes of hemorrhage after ligation in continuity are two, laceration of the coats and suppuration. No case of secondary hemorrhage following ligation in continuity is known where the coats were not ruptured and suppuration did not occur. The formation of clot has nothing to do with the prevention of hemorrhage.

Pare, in 1570, taught that an artery after amputation should be ligated over a small yiece of lint and the liga ture only drawn sufficiently tight to occlude the vessel and not to injure its coats. He states that he had never seen a drop of blood come from a vessel so ligatured.

Of the tkree methods of ligating an artery in continuity that of Celsius of double ligating and dividing is unnecessarily severe, and cannot be applied if deemed best to many of the large arteries. Second, a simple ligature with rupture of the coats weakens the vessel and renders secondary hemorrhage liable. The third method of tying in one place without rupture of the coats should be adhered to.

In the choice of ligature material they give the preference, first to oxperitoneum, second kangaroo tendon, third boiled floss silk, and failing in these, boiled Chi nese twist, chromic catgut or silk worm gut.

In the choice of a knot they hold that the reef and surgeons knot are unreliable as the first hitch may loosen before the second can be applied. Their preference is for what they term the stay knot, made by passing two or more strands of floss silk around the vessel parallel to but not overlapying each other. The first stitch is made in each strand separately, the ends on one side of the vessel are then taken in one hand, while those on the other are taken in the other hand, and the first hitch is made tight. The second hitch is then made by tying them as one thread. Their work in this field is a monument of painstaking investigation and scientific accuracy.

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A Case of Aphasia Following Twin Delivery.

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Mrs. S. B., age 32, was confined December 27th, 1893 with twins. There was profuse post partum hemorrhage with great collapse, necessitating the free use of stimulus. Complete reaction was established in an hour or two, and the case progressed satisfactorily. On January 2, or two weeks after delivery, she sat up for the first time, apparently quite as well and cheerful as could be expected. That night she went comfortably to sleep, but awoke about midnight groaning with neuralgic pains in her head and neck Although I was not called to see her during the night, she was given 60 grains of bromide of potassium, and then slept until morning. The pains having then returned again, I gave her one-half grain codein to be repeated in a half hour if not relieved. This, however, afforded only partial relief. On

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Friday the 13th she drank a part of a cup of coffee. About two hours afterwards she was discovered in an unconscious condition, and remained so three or four days. During this time her respiration was somewhat hurried, her temperature ranged from 102° to 104°. Her bowels and kidneys were acting properly. At this juncture, my friend Dr. A. W. Burnet was called in consultation at my request. He suggested the application of a blister to the scalp, as there was some dilatation of the pupils, indicating cerebral pressure as we believed. But the blister drew very imperfectly. In addition to the other treatment, I had also ordered hot mustard footbaths three or four times a day as a revulsive. At the same time, as much liquid food was given her as she could be induced to take. At length however, she gradually aroused from this unconscious or lethargic condition, but the power of speech appeared to have entirely deserted her. Yet she seemed to fully comprehend what was said to her; for, when spoken to she would pleasantly smile, when asked to show her tongue she would immediately do so, or when I would get my thermometer to take her temperature she would at once open her clothing. There was not the slightest symptom of paralysis anywhere, for even her tongue when protruded did not deviate to either side. Finally to our great relief and delight, her speech began slowly to return. At first, when asked any question, she could only reply in the monosyllables "too me, too me", repeating them two or three times in succession. As improvement progressed, she would make great efforts to express herself, and in a very impatient or troubled manner would exclaim "Oh I can't". She was unable to recall the proper words for her use, but made ridiculous and painful blunders, although she is an intelligent and well educated lady. About the middle of February, or a month after this attack began, it was with difficulty that she could read her bible. She could spell such words as "reigneth" but could not pronounce them. On the 27th of February, two months after confinement, I called to see her, and she could not then call the names of her nearest neighbors. And even at the time of this report, April 8th, she has by no means entirely regained her speech.

This is a brief history of this case recorded partly from notes and partly from memory. And as it exhibits an inability both to remember and pronounce words, it may be properly termed a case of amnesic and ataxic aphasia; for the forgetfulness of words, the coordinating mechanism of speech is evidently involved. If the brain lesion, of whatever nature it may be, is such as to seriously and permanently impair the function of Broca's region, then, adopting the "doctrine of the quality of the cerebral organs of language", we may hope for the development and vicarious agency of the corresponding organs of the right hemisphere. We therefore believe that the proper treatment of this speech disorder will include such mental and physical hygiene and training as will promote the formation anew and gradual enlargement of the patient's vocabulary. At the same time, we fear that the future of the case is very unpromising as to the complete restoration of the linguistic faculty.

A Case of Obstruction and sloughing of a Portion of the Small Intestine—Recovery.

W. H. Z, age 40, clothing merchant was suddenly attacked at his store, January 21, 1893, with violent pains on the right side of the abdomen. The pulse was weak, and there was some pallor of the face, also spasm of the hands and fingers. I at first thought that I had a case of renal colic to contend with, as the symptoms somewhat resembled those of that affection, although the kidneys and bowels had both acted during the day. Several hypodermics afforded only partial and temporary relief. He was never entirely free from pain, and the next day the whole abdomen became tpmpanitic and tender. I then began to suspect that the diagnosis lay between typhlitis and intestinal invagination. In addition to the abdominal tenderness, on a very careful palpation I thought I could feel a tumor in the right iliac region. Up to this time there had been no further movement of the bowels. This I thought, however, might be due in some measure to the anodynes that had been given. At any rate, although it is opposed to the teachings and experience of the present day, I concluded to venture to give cathartics, but without any effects. As the condition of the patient was becoming critical I believed, and further delay might be fatal, I deemed it imperative to seek council, and Dr. A. W. Burnet was called to my assistance. After mature deliberation, we agreed that we would wait until the following day, when, if there was no improvement, we would feel justified in resorting to laparotomy. On the following morning however, our minds were much relieved by finding that the patient had had two or three bilious actions, showing that the obstruction whatever and whereever it was, was at least partially removed. Dr. Burnet did not consider it necessary to see the patient again, but left him to my care. But his progress towards recovery was slow. The tympanites and tenderness on deep pressure continued, the abdominal walls having a leathery hardness. Fever developed, his temperature ranging from 100° to 103.5°. Meanwhile his symptoms fluctuated very much, feeling one day much better and the next day less comfortable. This condition of things remained until the 14th of February, 24 days after he was first attacked, when with an excessively fetid discharge from the bowels he passed a portion of intestine. The fetor clearly indicated that the process of gangrene had been probably going on all this time. For a day or two afterwards, the evacuations were of a dirty, watery character, stained with blood, and with a few small clots floating in them, which evidently came from the raw surface left by the slough. He sat up for a short time a day or two previous to the detachment of the slough; but after this occurred I confined him to the bed, giving a grain of opium occasionally to prevent peristalsis of the bowels, and feed-

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ing him on bland and nourishing liquids. His actions gradually assumed a more healthy and natural character his other symptoms improved, and I now began to hope for a speedy and uninterrupted convalescence, but the end of the trouble was not quite yet. For on the 23rd of February an inflamed, erysipelatous swelling appeared just below the lobe of the right ear, involving a part of the neck and cheek. I at first viewed this unexpected complication with much apprehension lest it might be incipient septic infection. But by the 2nd of March, or a week afterwards, it had subsided under treatment, and there was steady improvement in all the symptoms until final recovery.

Up to the time when this patient resumed his business the case embraced a period of eight weeks.

Owing to the acknowledged difficulty of this subject, and the conjecture and doubt by which it is encompassed, it will be observed that I have not hitherto attempted to locate this trouble; but my belief is that it was either in the lower portion of the ileum, or at the ileocecal junction.

I sent the pathological specimen to Dr. Robert Wilson of Charleston, S. C., for microscopic examination, and he made the following report:

It is composed of two layers.

1. Mucous, containing bundles of new formed tissue (connective), arranged irregularly throughout the layer. The normal structure of this layer has been almost wholly obliterated by the long-continued inflammatory process, the only traces of which I am able to detect being a few remains of the crypts of Lieberkuhn.

2. Connective tissue. This is present in the form of rather a broad band, the fibres of which lie for the most parallel to each other in straight or wavy bundles. No trace of muscular tissue can be found. I therefore conclude, that the specimen is a slough of the small intestine comprising the two internal layers only, viz.: the mucous and the submucous.

Excision of an Hydatid Cyst of the Lung.

—Delageniere reports the following case (Boston *Med. and Surg. Jour.*): A woman seized with intense pain in the left side of the chest, was found to have considerable effusion in the left pleura. Puncture gave issue to a greenish puriform liquid. On incision, the lung was found adherent to the thoracic wall; the incision was carried several centimeters through lardaceous tissue bounding a cavity; this was freely opened and drained; on the following days fragments of hydatid cyst were discharged. A solution of sublimate was injected several times, but there being no improvement in the patient's condition, a large opening in the chest wall was made, twelve centimeters of the seventh and eighth ribs, and ten centimeters of the sixth, being resected; the cyst, which formed a cavity of the size of a man's fist, was then easily stripped away. The result was a complete cure.

EDITORIALS

L. T. Riesmeyer, M.D., Editor.

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Ascites in Women.

It is a well-known fact that ascites as a rule is a symptom of disease of the liver, heart or kindeys, and is due to an interference of circulation. If these organs are found to be healthy we have to take into consideration tuberculosis and carcinoma of the peritoneum. In women, according to Gusserow, we have to look for still other causes, viz :

1. Papilloma of the ovaries.
2. Carcinoma of the ovaries.
3. Benign disease of the sexual organs.

In addition to these Gusserow enumerates in an article published in the *Arch. f. Gyn.*, also tuberculosis and carcinoma of the peritoneum as particularly occurring in women.

Tubercular peritonitis occurs pre eminently in youth and as a rule there are no signs of tuberculosis in other parts of the body. In these cases the visceral and parietal peritoneum is covered with numerous small, greyish-white, slightly reddish nodules, whose size varies between that of the point of a pin and a lentil. It is claimed by Gusserow that these nodules are often, but not always due to tubercular origin and he therefore proposes the name of peritonitis nodosa for this affection. It is well known that this form of ascites often gets well by laparotomy, the modus operandi of this therapy still being an unsettled question.

The papillomata of the ovaries are due to an abundant proliferation of connective tissue cells which take

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their origin from the surface of the ovaries, while the real ovarian stroma is either thickened or nearly normal. It is characteristic in these cases that nearly always both ovaries are affected and that the main symptom is a rapid accumulation of large quantities of fluid within the abdominal cavity and they are strictly to be differentiated from the rare papillary kystoma of the ovary where these characteristics are absent.

The tumors are usually so small and soft that they are rarely to be felt even after puncturing the abdomen and letting out the fluid. It is therefore impossible to make a certain diagnosis before laparotomy and, on the other hand, this operation will save the patients from certain death.

In ascites caused by carcinoma of the peritoneum or the ovaries nodular tumors may be felt especially after puncturing and in these cases laparotomy is advocated for the following reasons: First, because we do not know with certainty that the nodular tumors are always carcinomatous, and secondly, we have in laparotomy the only means of determining whether an extirpation of the ovaries is still possible or rational.

It is in carcinoma of the ovary, before laparotomy, impossible to say whether the peritoneum is also diseased. While there are cases in which the progress of the disease is accelerated, it may, after laparotomy, be found that the nodular tumors are not carcinomatous. In some of Gusserow's cases the progress of the disease was retarded where only abdominal section was made without removal of any cancerous tissue.

In reference to ascites due to benign affections of the sexual organs three cases are related by Gusserow that remained well after abdominal section. In number one a fibroma of the ovary was found, in number two a cystic tumor of the tube of the size of a hen's egg, and in number three a kystoma of the ovary in which no signs of malignancy could be detected. It was impossible in these cases, during the operation as well as later, to determine the cause of the large accumulation of fluid in the abdomen.

It will be of interest and importance to further inquire into the causal connection between ascites and benign tumors of the female sexual organs. It appears to us that the occurrence of ascites in consequence of benign tumors in the places related above are not any harder to explain than that occurring in connection with tuberculosis or carcinoma of the peritoneum.

Diuretin.

We have used this drug in a number of cases of dropsy due to various affections of the heart and kidneys with favorable results. We have found, however, that its continued use has a very depressing effect, the patients after takiug it two or three days in a dose of even five grains every two hours complaining of great weakness and in one case of arteriosclerosis it produced temporary collapse. We consider the drug however of great therapeutic value and think that the following article from the pen of James B. Herrick of Chicago, for which we are indebted to the *Pacific Record*, will be of interest to our readers.

The experiments of Schroeder reported in 1889, and confirmed by clinical observations made at Schroeder's suggestion, the same year by Gram, of Copenhagen, established the value of the alkaloid theo-bromine, a product of the seeds of *Theobroma cacao*, as a diuretic of great power, acting by direct stimulation of the renal epithelium and lacking in the unpleasant effects upon the nervous system, tinnitus, restlessness, insomnia and delirium, attributed to its homologue caffeine.

Gram, after trial of many compounds, overcame the disadvantage of the insolubility of the alkaloid by forming, by combination with salicylate of sodium, a double salt, theobromine-sodium-salicylate, which should contain at least 46.5 per cent of the theobromine (Knoll's is said to contain 48 per cent) and to which the name diuretin has been given. The therapeutic as well as commercial value depends upon its richness in theobromine. The compound occurs in the form of a white powder, soluble in less than its own weight of warm water, the solution remaining perfect on cooling. The daily amount administered—sixty to one hundred and twenty grains—is best given in divided doses of fifteen or twenty grains in solution, pill or capsule. Exposure to the air permits of the absorption of carbonic dioxide, forming an insoluble compound, so that the drug should not be given in powder. With acids or syrups containing the fruit acids the theobromine is precipitated as a white powder. For solutions, therefore, water is the best vehicle, being flavored if thought advisable, to conceal the slightly sickish-bitter taste, with peppermint, wintergreen, or some other aromatic. Usually very little, if any, objection is made by the patient, because of its taste or any unpleasant effects.

Since Gram's paper in January, 1890, numerous observers have reported their experiences with diuretin. Hoffmann, Koritschoner, and Kouindjy-Pomerantz, published articles the same year, confirming Gram's and Schroeder's position as to the remarkable diuretin and its value in removing dropsical fluids. In Koritschoner's series of thirty-eight cases from the Vienna Hospital, excellent results were obtained in all, save five who came to the hospital practically *in extremis*. The cases successfully treated included dropsies from cardiac and renal diseases, from cirrhosis and cancer of the liver and from tubercular peritonitis. The only unpleasant effects noted were, occasionally vomiting and diarrhea. Koritschoner, after a dosage of one hundred and fifty grains a day found palpitation and extremely anxious expression of countenance to follow. He produced this result both in a patient and in himself by this dose, which may therefore be looked upon as a maximum daily amount. The removal of the dropsical fluid in some cases was so rapid as to cause alarming collapse. Koritschoner therefore advises that the first doses should be small and gradually increased in size until the maximum dose is given, or the desired effect produced. In twenty-

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three of the thirty-eight cases the effect was most excellent and it could only be said to be a failure in the five before mentioned cases, who entered the hospital beyond all hope of aid. In dropsies due to cardiac disease the result was most brilliaut. Not only was no irritating effect produced on the renal epithelium, but in two cases of scarlatinal nephritis it caused prompt response in an increased activity of the kidney, and during its administration blood and casts disappeared from the urine.

Hoffmann made careful observations in Erb's clinic at Heidelberg, on seventeen cases of dropsy in which diuretin was given, and found the effect in dropsy of cardiac origin most remarkably satisfactory. In nephritis his results wrere not uniformly good, the best being obtained in the acute form. In cirrhosis of the liver the result was negative. Hoffman calls attention to the fact that the amount of urine passed under the influence of this drug, is in direct proportion to the amount of dropsical fluid present, while the specific gravity decreases with the increase in the amount of urine. It may be mentioned in this connection, that others, as Masius and Kross, have seen the specific gravity of the urine remaining high, owing to the greater amount of solids eliminated, notwithstanding the free diuresis. Contrary to Schroder and Gram, who regarded diuretin as a purely renal stimulant, he finds as the result of careful watching of the pulse and heart, including the use of the sphygmograph, that under its influence the pulse becomes slower, fuller, stronger and more regular. The only unpleasant effects noted were, in a few cases, slight vomiting and diarrhea, completely offset by the removal of the dropsical effu sion, the improvement in the heart's action, disappearance of bronchial catarrh, dyspnea and insomnia.

Mme. Koumdji-Pomerantz, as the result of experimental and clinical investigations in the laboratory of Dujardin-Beaumetz, reached the conclusions that diuretin, in daily doses of forty-five to seventy-five grains, is a diuretic of greater power, though less toxicity, than caffeine, with no action upon the nervous system and little effect upon the heart and producing no unpleasant urethral symptoms. It acts by stimulating the renal epithelium and is of great use in dropsies where this epithelium is not so hopelessly damaged as to be out of reach of all drugs. Patients do not become rapidly habituated to the drug. It should be given about three hours after meals to avoid unpleasant gastric symptoms supposed to arise from the action of the gastric juice upon the remedy, when it is taken with the food.

During 1891, reports from various sources, mostly German, appeared confirming, in the majority of instances, the conclusions of the observers of the year previous. Geisler had excellent results in the dropsy of valvular heart disease and in that of acute nephritis, while in myocarditis, chronic nephritis and hepatic cirrhosis the results were negative. Pfeffer in forty cases had good results in cardiac dropsy as well as in chronic nephritis and hepatic cirrhosis. His experience in acute nephritis was not so favorable. In some cases the amount of urine for twenty four hours was six litres. Both Geisler and Pfeffer regard diuretin as a cardiac tonic and found after its use an increase in blood pressure. Schmieden and Siefart agree with others that the best results are obtained in cardiac dropsy and where there is general circulatory disturbance, though the latter obtained fairly good effects from diuretin in dropsy from portal vein obstruction.

In this country, Dr. Robert H. Babcock, of Chicago, was one of the first, if not the first, to report on the use of diuretin. He had excellent results, especially in dropsy dependent on valvular heart disease, and was convinced that, as Hoffman early asserted, the remedy has an action upon the heart as well as upon the kidney. Lagana regards diuretin as the very best diuretic known acting as well in acute as in chronic affections, having no deleterious influence on the kidney and more certain in its effects the more extensive the dropsy. He employed it in dropsy of heart disease, nephritis, hepatic cirrhosis and in acute and chronic pleurisy. Demme obtained good results in children in scarlatinal nephritis and in cardiac dropsy. Edema in acute nephritis disappears, according to his observation, more rapidly under the influenee of this drug than of any other.

Two unfavorable reports were made, one by Chmelnicku from Wurzburg, and the other by Nickstaedt from Erlangen. The former found it of small benefit not alone in nephritis and portal vein dropsy, but in valvular diseases of the heart. In cardiac dilatation due to emphysema, however, the good effect was obtained, Nickstaedt by doses of sixty grains per diem produced in the healthy and the sick, malaise, headache, vomiting. He obtained less favorable results than with squills, acetate of potassium or calomel and thinks the use of the drug should be restricted to cases of dropsy where other diuretici fail.

In 1892 several reports have came in, among them an unfavorable one from Hare, of Philadelphia, and a favorable one from Frank of Prague. Hare's report is but preliminary and based on the observation of four cases. His cases are not the ones in which we should expect the most marked effects from the remedy when we consider that it is in cardiac dropsy that its influence is most pronounced and the effect shown on the urine is in proportion to the degree of dropsy. His first case was one of valvular disease with albumen but no dropsy; no diuresis. Second, valvular disease, moderate edema, moderate diuresis, which Hare attributes to digitalis rather than to diuretin. Third, general anasarca, albumen, no valvular disease; no increase in amount of urine. Fourth, enlarged prostate, concentrated urine, no edema; no marked effect, though no accurate measurement of urine was possible.

Frank in von Saksch's clinic, as the result of experience in thirty four cases, regards diuretin as a superior diuretic in cases of dropsy and as a heart tonic, though inferior in this latter respect to digitalis. His

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best results were in cardiac dropsies, though in chronic nephritis, pericarditis, hepatic cirrhosis, he had fairly good results. In one case of chronic nephritis the effect was most remarkable. The patient passed, on the fifth day after taking the remedy, 3750 c. c. instead of 250 c.c. of urine. With this there was improved action of the hypertrophied and laboring heart and a rapid disappearance of the hydrothorax, hydroperitoneum, etc. Diuretin was stopped and digitalis begun and the amount of urine decreased at once. That the improve ment in the heart's acton was due to the effect of the remedy on the heart and not alone to the disappearance of the dropsical fluid, was proven, because in many of the cases the pulse was good so long as the diuretin was continued, but became poor when it was stopped." Others have noted the bettering of the heart's action before the disappearance of the edema, indicating a primary effect of the drug on the heart. In all of Frank's cases where any favorable result was obtained there was six to fifteen fold increase in the urinary secretion. There was no renal irritation. In two cases albumen disappeared while the drug was being taken.

In a case of acute scarlatinal nephritis in a child of 11, the urine under thirty grains of diuretin a day has increased from eight ounces to thirty-one and the albumen has decreased from 50 per cent, by volume, to about 2 per cent. The case has only been under treatment for the nephritis for five days but at this writing the diuretin appears to be acting favorably.

It will be seen that in the case of cirrhosis of the liver the result was unsatisfactory, for though there was a slight increase in the amount of urine, no diminution in the dropsical fluid was perceptible. In the three cases of dropsy due to valvular heart disease the effect was eminently satisfactory, there following promptly increased amount of urine, rapid diminution of dropsical fluid, strengthening of the heart's action with slowing and regulating of its rapid and irregular beat, improvement in appetite and disappearance of dyspnea and cyanosis.

In these cases I administered at the same time a cardiac tonic, strophanthus in case 2, and digitalis in the others. In case 1, a part of the improvement can, perhaps, justly be attributed to the digitalis, as this remedy has never before been administered; but the free diure sis and rapid disappearance of dropsy were far beyond anything I have ever seen from ten drops of the tincture of digitalis three times a day, and after stopping the diuretin fluid rapidly reappeared in the abdomen. In cases 2 and 3, digitalis and various other heart tonics had been taken almost constantly, in the one case for nine years and in the other for four. In the latter case, in fact, I had the patient continne with exactly the same capsule (pulv. digitalis, spartein sulph., extr. nuc. vom., etc), he had been taking for many weeks and during the taking of which, the fluid had accumulated in the abdomen. In all three of these cases, too, the diuretin was stopped and within forty eight hours there was a diminution in the amount of urine, and in cases 1 and 3, a reaccumulation of dropsical fluid. Return to diuretin produced the same favorable consequence as at first. The effect of the diuretin cannot, therefore, be questioned. It has seemed to me an advantageous method of administering the drug to combine it, in these heart cases especially, with digitalis or some other heart tonic. In my cases in this way, a moderate dose of sixty grains a day produced all the results that could be asked I find that Frank regards this as an excellent method,and Demme, in the case of a child, gave first digitalis and then diuretin after the effect of the former drug on the heart was manifest. The unfavorable consequences, vomiting, slight chill and fever and diarrhea, disappeared promptly on stopping the remedy. These effects were possibly cumulative, the drug having been administered in the one case for three weeks and in the other for eight days, in either case in increasing doses. Cumulative effect is not noted by other observers and it may be that the effects noted by me are no more than the vomiting, diarrhea, etc., spoken of by others. The skin lesion which appeared in case 4, is different from anything I have seen noticed. Its occurrence at the time of administration of the maximum dose for this patient, as evidenced by the gastro-intestinal symptoms and its rapid disappearance upon stopping the drug, lead me to regard it as due to the remedy and not solely accidental. Demme, in a ten-years'-old child with amyloid disease of the liver, spleen and kidney, produced by diuretin a rash resembling that of measles. Ninety grains were given in the course of four days. Profuse diarrhea occurred at the same time the rash appeared. I find no other record of skin lesion due to the ingestion of the drug.

Since writing this article I have had kindly placed at my disposal by Dr. A. E Halstead, of this city, the notes of four cases occurring in his practice, in which diuretin was employed. An abstract of these notes is here appended:

Case I.—Mrs. E. G, mitral regurgitation; chronic parenchymatous nephritis with acute exacerbation. Total urine for twenty-four hours, five ounces; vomiting, twitchings, slight coma. Given calomel gr. ¼, and diuretin gr. x, every two hours, and in addition a hot bath. Gradual improvement. At end of one week, urine twenty four ounces daily, no vomiting, mind clear.

Case II.—J. G, mitral stenosis and regurgitation, chronic nephritis. General anasarca, severe dyspnea; amount of urine secreted in twenty-four hours, fifteen ounces. Treatment, magnesium sulphate, ss. ounces A. M. and P. M. tr. digitalis mx., t. i. d., and diuretin gr. x, every four hours On the second day urine forty ounces. At end of week 120 ounces. At end of two weeks entire disappearance of edema, dyspnea, etc.

Case III.—A. H, aged 83. Diagnosis: Arterio capillary fibrosis; contracted kidney, secondary mitral insufficiency. General anarsarca, ascites, hydrothorax. Under diuretin, pulse harder, dyspnea greater, headache and vertigo marked. Diuretin discontinued and jalap, cream of tartar, and later, nitroglycerine substituted.

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Under latter treatment amelioration of all unpleasant symptoms.

Case IV.—Miss M., age 17, chronic nephritis with acute exacerbation; uremic prodromas marked. Urine eight ounces. Given digitalis, diuretin and calomel Urine at end of two weeks fifty ounces.

In these cases of Dr. Halstead's, it will be noticed that a favorable result was obtained in three, while in the case of capillary fibrosis there seemed to be an increase of blood pressure and exacerbation of all the unpleasant features of the disease. The most marked result in Case II, was in a patient suffering from valvular disease with excessive dropsical transudation, apparently the kind of case in which we are to expect the best effects. While all the benefit derived in these cases cannot be ascribed to diuretin, for other remedies were freely combined with it, Dr. Halstead assures me that from his observation of the cases diuretin deserves the great share of the credit.

That diuretin, properly employed, is a remedial agent of great value, must, I think, be admitted by all. While the exact pathological conditions that call for its exhibition cannot as yet be specifically stated and disappointing failures will therefore attend its misapplied use in many cases where too much will be hoped for, yet, a study and comparison of the results of the various observers who have employed this remedy in the past three years, yield facts from which certain conclusions can be drawn.

My study of the literature of diuretin, and experience with the remedy seem to warrant the following deductions:

1. Diuretin is a diuretic acting by direct stimulation of the renal epithelium and best suited to cases in which there is a general dropsical effusion.

2. It is the best medicinal remedy for removing dropsical fluid due to valvular disease of the heart, after digitalis and pure cardiac tonics have failed.

3. It can be advantageously combined with digitalis and pure cardiac tonics.

4. It probably has a direct effect upon the heart as well as upon the kidney, slowing and strengthening its action and improving its rhythm. (This is disputed by some, viz.: Cohnstein "Ueber den Einfluss des Theobromins, etc., auf den arteriellen Blutdruck." Inaug.-Diss., Berlin, 1892).

5. Diuretin has oftentimes a beneficial effect in other circulatory diseases with dropsy, as myocarditis, pericarditis, aneurism, arterio sclerosis. Its action is here more uncertain than in valvular disease.

6. In the dropsy of nephritis it can be used without danger of irritating the kidney, the effects in acute nephritis being more certain than in chronic nephritis. Where the renal epithelium has undergone too extensive degeneration, the drug may fail to act.

7. In the dropsy of portal obstruction, and especially of cirrhosis of the liver, it usually fails to give good results.

8. It occasionally causes nausea, vomiting, diarrhea, palpitation, headache and slight fever; rarely skin eruptions follow its use.

9. The maximum daily amount that can be given with safety is 150 grains; the average daily amount is 50 to 120 grains, given in divided doses. When combined, in heart cases, with cardiac tonics, smaller doses of diuretin can be employed.

10. It should be given in solution in water or milk, or in pill or capsule, without acids and by preference between meals.

Medical Publishers' Organization.

Hotel Arno

The proprietor of this, one of the best hotels in Washington, D. C., has kindly proffered to furnish a suitable room free of any charge for the meeting of the Publishers of Medical Journals to organize a Medical Publishers Association. The delegates attending the Pan-American Medical Congress which convenes in Washington on the 5th prox, will find the accommodations of this hotel first-class, the manager, Mr. Roe, a cordial gentleman and always ready to do everything in his power to make his guests feel at home. The Medical Publishers' meeting being held in this hotel they will be specially cared for, and we trust the gentlemen representing their respective journals will make it convenient to stop at the Arno.

Carbonate of Guaiacol in the Treatment of Typhoid Fever.—The *Med. Week* for June 30th contains an abstract of Dr. F. Holscher's experience in the treatment of typhoid fever by the administration of carbonate of guiacol in doses of fifteen grains night and morning. With this treatment the tongue became moist the appetite returned, and the stools, that smelled strongly of guiacol, gradually assumed a firmer consistence. In some instances the administration of the drug was even followed by constipation, but this usually disappeared spontaneously, seldom calling for the administration of enemata. It exerted a favorable influence on the bronchitis that so frequently complicates typhoid fever, relieved dyspnea, and facilitated expectoration. It is not an antipyretic, but an intestinal antiseptic, and has no effect on the temperature when administered alone; but with acetanilide the effect produced is more marked and lasting than that obtainable with any other antipyretic. By its antiseptic action on the intestinal contents it prevents the formatien of toxic products in the intestine, and the accidents caused by the absorption of these toxines into the circulation are prevented. Hence the patients treated by this method seldom show any ataxic or adynamic phanomena, and usually remain free from hallucinations and other cerebral manifestations. Dr. Holscher was enabled to dispense with the use of cold baths, and his typhoid fever patients never presented other than the mildest symptoms of the disease.

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ABSTRACTS

Two Cases of Blindness, one Bilateral, Resulting from Facial Erysipelas.—Mr. Snell (*Amer. Jour. of Ophthalmology*) read particulars of these cases at the Ophthalmol. Soc. of the United Kingdom. The first occurred in a man, aged 48. The attack had chiefiy affected the left eye and side of face As the erysipelas subsided the left eye was found to be blind. When seen at the end of five weeks the left optic papilla was hazy and pale, and the arteries small; there was no perception of light. The other case was in a man, aged 53. The erysipelas affected both sides of the face and right arm; there was a good deal of swelling about the face and eyes. When he was able to open his eyes he found himself quite blind. When seen ten weeks later, not the faintest light perception existed in either eye; both pupils widely dilated; papilla on left side smudgy and passing into atrophy; arteries perceptibly lessened in callibre; veins less altered; right optic disc partly covered by a hemorrhage, but was apparently undergoing the same changes as the left. At a later date extensive hemorrhages took place into left vitreous, which prevented details of the fundus being noted; in the right the disc was ill-defined, owing to a hemorrhage partly covering it; a vessel which could be traced a little way from the disc was filled with dark blood; very few vessels were visible; those seen looked like lines, some dark looking hemorrhages were visible in the retina at the periphery, and some in the vitreous also. Mr. Snell remarked that there appeared to be (Knapp) in all cases in which blindness came on during the erysipelatous attack, evi dence of orbital cellulitis, however slight. It probably occurred in these cases. He thought that pressure by the orbital tissues was not always enough to account for the conditions found. Possibly the peculiar poison of erysipelas promoted a condition of the vessels favor able to the formation of thrombi.

The Treatment of Diarrhea.—Dr. Heinrich Stein (*Amer. Jour. of the Med. Sciences*) gives a brief *resume* of the subject, considering especially the remedies which influence the functions of the alimentary canal. In the cases of undue motor activity of the intestine, opium acts upon the inhibitory nerves in the same way that digitalis does upon those of the heart, interfering with peristalsis and thus checking the diarrhea. In connection with this remedy other means, as electricity or hydrotherapy, may be of assistance. Of the same mode of action is strychnine, but of course, it cannot be considered on account of its great toxicity. A remedy which has a high degree of usefulness on account of its paralyzing influence upon the motor nerves of unstriped muscles is atropine, which has been proved by experimentation to possess this property. The use of preparations of belladonna in lead-colic is one of long standing. In case of indigestion in stomach or intestine, and absorptions of toxines, antiseptics are indicated, of which creasote is the one mentioned. Exceptionally the use of either galvanism or faradism can be recommended. If the former, two large electrodes are used, one upon the back and the other upon the abdomen, through which a moderately strong current (three to ten milliamperes) should be passed In some cases faradism has yielded good results. An electrode introduced into the stomach and the current passed outward to one upon the abdomen may be employed. The influence upon the temperature, changes in the calibre of the bloodvessels, and in peristalsis can be brought about by hydrotherapy, and the effect of heat upon the peristalsis is a long-recognized fact.

The Treatment of Acute Croupous Pneumonia in Children.—Dr. J. F. Goodhart (*Brit. Med. Jour.*) believes that the simplest methods are, for the most part, the most successful: a little acetate of ammonium to induce diaphoresis; paregoric or Dover's powder to ease pain and not to interfere with the action of the skin; aconite, if the disease be acute; carbonate of ammonium as a stimulant; an occasional dose of an antipyretic might be useful. Poultices had been abandoned in favor of either hot or cold packs, and a light cotton-wool jacket. The ice-bag to the chest was a very valuable method of treatment, and one that might be adopted in all but the youngest children without any undue precautions.

Dr. Henry Ashby uses the methods given above, as well as digitalis or alcohol, and has found oxygen-inhalation very useful as a temporary restorative. The cold, or rather the graduated bath in hospital practice had been followed by considerable success, but it undoubtedly requires care, as an alarming depression might easily be produced.

Dr. C. N. Gwynne did not consider that the ice treatment could ever be adopted as a routine treatment. If there was high temperature and great restlessness, antifebrin was a valuable adjunct to other treatment. Alcohol was unnecessary in most cases, and often harmful.

Dr. Moss Madden relies upon quinine or antipyrine in combination with small doses of gray powder, a milk diet, and, when stimulants are wanted, either brandy or whiskey in quantities proportioned to the age and condition of the child.

Dr. Samuel West has found that antipyretic drugs are of doubtful value; baths and packs have their uses, but also abuses. Dyspnea and cyanosis have but one means of relief—free venesection. Among the cardiac tonics he would give a high place to caffeine, either by the mouth or subcutaneously.

Orificial Surgery.—The next annual class for instruction in orificial surgery will assemble in Chicago on the morning of September 4. It will have a four hours' daily session during the week. For particulars address, Dr. E. H. Pratt, R. 56, Central Music Hall, Chicago.

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MEDICAL SOCIETIES

Contribution to the Histology of Psoriasis —Dr. Piffard read a paper with this title before the New York Dermatological Society.

Dr. Bronson expressed surprise that the author had found the stratum granulosum peculiar to psoriasis; he had observed it in other chronic diseases as lichen planus. He did not consider it probable that the active process of psoriasis commenced in the stratum granulosum, but rather in bloodvessels of the papillary layer.

Dr. Sherwell believed; of course, that some pre-inflammatory condition must exist in the derma before the stratum granulosum could undergo any change. Dr. Piffard seemed to lay too much stress on the change of this layer of cells alone in the disease under question.

Dr. Robinson said the case was evidently a very chronic one, he had examined sections from acute, as well as from many chronic cases, without finding the disappearance of the stratum granulosum as mentioned by the author. Like Dr. Fordyce, he had found similar conditions of the rete in other chronic diseases—how much of it was due to the psoriasis process in the present case was difficult to say. He had observed great changes in the rete; the changes in the stratum granulosum he thought was rather a result than the essential process of psoariasis. Cells with nuclei in the corneous stratum were found frequently in other diseases. He had some doubts about the changes in the stratum lucidum.

Dr. Elliot could not see how the author of the paper could discriminate between the conditions belonging essentially to the psoriasis itself and those engrafted upon them through the pumice stone treatment. Precisely similar changes were found in the rete and increase of the stratum granulosum in warts, in lichen planus, in nevus verrucosus, in cystadenoma of the sweat glands shown at the meeting, and also in many other pathological phenomena of the skin. It would not appear therefore, to him, that they could be regarded as an essential part of inveterated psoriasis. In opposition to Dr. Robinson he would locate the first changes in psoriasis in the derma and not in the rete. He was glad to have heard the paper and it would lead him to pay more attention to the stratum granulosum in the future.

Dr. Piffard in reply to Dr. Bronson said that the photographs which he had presented answered the question in regard to the disappearance of the stratum granulosum. He had described only what he had seen, and had tried to trace the connection between the different conditions which he had found only as far as they belonged to this case, without drawing conclusions as to psoriasis in general. He did not consider the changes in the stratum granulosum as peculiar to psoriasis either. What he wanted to emphasize was:

First, that there had been too little attention paid to the stratum granulosum and its changes. He had not meant to consider the question in which part the process originally commenced, nor whether the etiological disturbances were vascular or neurotic. There was in this case decided evidence of an abundant proliferation in the rete, in which there exists great thickening and probably has existed for years.

Second, he wished to place the question before the Society; with this chronic thickened condition of the rete before you, how are you to cure the case? how are you to bring back the thickened rete to its natural condition?

Dr. Robinson asked whether Dr. Piffard meant that a thickened rete cannot return to normal condition.

Dr. Piffard answered, he meant indeed in an inveterate case like the present one that the thickened rete could only with difficulty return to normal condition.

Dr. Robinson thought that it might be brought on by the internal administration of arsenic.

Dr. Cutler thought Donovan's solution (mercury and arsenic) would have effect.

Dr. Klotz said in less extended cases caustic potash might be applied in milder solutions, however, than originally recommended by Hebra. Pilocarpine had not proved efficient in psoriasis, although it did good service in similar conditions.

Dr. Elliot showed microscopical sections from a case clinically of nevus unius lateris, but which proved to be an adenocystoma of the sweat glands. He called particular attention to polypoid ingrowths into the canal of the sweat glands. The same condition he had observed in sections from the case in Doutrelepont's Clinic, but the fact had not been mentioned by the author.

American Public Health Association.—This Congress will be in session in the Art Institute Building, Chicago, October 9—14, 1893.

Membership in the Congress is open without fee to all persons interested in public health, who comply with the formalities of registration.

The proceedings will be published by the American Public Health Association, and will be distributed to all members of the Congress, who, on the payment of five dollars and election, may become members of the American Public Health Association. This payment of five dollars entitles the member to a copy of the proceedings, is the only fee required, and is entirely voluntary.

Registration may be conducted in person or by correspondence, and it will facilitate the work of the Congress for this to be accomplished as early as possible. To that end an official will be present in the Art Institute to attend to registration every day during the preceding week, October 2 to 7, from 9 to 5 o'clock, and again on Monday, October 9, during the same hours. Registration may also be accomplished later, according to placards in the hall.

Correspondence on this subject may be addressed to

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"The Registration Clerk, Public Health Congress, Art Institute, Chicago." Checks should be made payable to the Treasurer American Public Health Association.

Registration consists in recording the name, including designating titles; the official representation, if any; the permanent residence; and the local address (this may be omitted or changed at discretion). The particular section the member wishes to work with will also be noted. No charge is made for registration.

Special business meetings of the American Public Health Association will be held each morning, including Monday, October 9, and also at 4 p. m. Monday, October 6, for the election of members.

The opening session of the Congress will be held in one of the large halls of the Institute, at 3 p. m., Monday October 9, and will be devoted to addresses of welcome by the President of the World's Congress Auxiliary, by the Mayor of Chicago, and by the President of the American Public Health Association, and to responses by foreign delegates. These will be followed by the Inaugural Address by the President of the American Public Health Association.

The mornings of Tuesday, Wednesday and Thursday, from 10 to 12 o'clock, will be devoted to discussions in general of the meetings of the Congresses upon the following subjects:

TUESDAY.—Diseases chiefly manifested in the air passages: Tuberculosis, Diphtheria, Pneumonia, their prevention or control through Public Health Service.

WEDNESDAY.—Diseases affecting the alimentary canal: The Diarrhœa of Childhood, Cholera, Enteric Fever.

THURSDAY.—The Eruptive Fevers: Small pox, Measles, Scarlet Fever, and the diseases of modern life due to nervous conditions.

FRIDAY morning will be given up to a business meeting of the American Public Health Association.

The general meeting of Saturday morning will close the Congress.

The afternoons of Tuesday, Wednesday and Thursday, and if necessary Friday, will be devoted to the work of the Congress by sections as follows:

I. International, National and State Hygiene: Its Methods and Relations, including Vital Statistics. ("State," as here used, indicates an autonomous part of a nation, as a kingdom of the German Empire, and integral State of the American Union).

II. Municipal Health Service. To include the control of the infectious diseases of man and animals, offensive trades, water supply, the disposal of excreta, garbage, and the waste of manufactories, schools and public assemblages.

III. The Infectious Diseases of Men and Animals: Their Causes, Prevention and Control.

There will also be general meetings of a popular character at 8 p. m. on Tuesday, Wednesday and Thursday, when addresses will be delivered on public health subjects of general interest. The object of these is to disseminate general information on such subjects as the prevention of infectious diseases; the causes of ill-health due to soil, air and water; the health and sickness of self supporters (workers).

All papers that are offered must be received by "The Secretary of the Public Health Congress, Chicago, Ill.," before September 15, 1893, and titles and abstracts of these by September 1.

Papers for the Congress not written in English should be accompanied by an English translation.

The time for reading a paper in a section is limited to fifteen minutes, excepting when illustration is required or where special extension is granted, when five minutes may be added in each instance.

Thirty minutes is the extreme limit of a paper in the general session. Members desiring to discuss subjects before the Congress must send their cards to the presiding officer in order to be recognized. The floor may not be occupied for more than five minutes.

It is desired to make the Congress a demonstration of practical methods, and papers on elementary topics or theoretical views cannot be accepted. Papers bearing on the objects of the Congress are solicited from every source, but their acceptance must depend on the approval of the committees in charge of the Congress. These committees are guided in this matter by the standing rules of the American Public Health Association Resolutions of praise or censure, or committing the Congress as such to special views, will be out of order.

The President of the American Public Health Association, which embraces the Dominion of Canada, the Republic of Mexico, and the United States, will be the President of the Congress.

Honorary Presidents will be appointed from other countries.

Vice Presidents of the Congress and of the sections will be made from the countries represented.

All persons from beyond the United States who anticipate being present, are requested to notify the secretaries as early as convenient. It will materially assist in the organization for the committees to be informed by Oct. 1 of the Americans who expect to attend.

Visitors to the Pan-American Congress.—Dr. Ernest Hart editor of the *British Medical Journal*, and Professor Dr. Czerny, of Heidelberg, will be among the guests of the Pan American Medical Congress. The latter is booked for the Pan-American excursion to Rome by the Werra.

Progress in Medical Education.—President Eliot, of Harvard University, in his speech to the Alumni on Commencement Day, announced that the Law School had raised its standard by requiring, after the year 1896, the degree of A.B, S.B., or Ph. B., as a prerequisite for admission to its courses. There is already such a requirement in the Divinity School, and President Eliot expressed the hope that hereafter it would be adopted for the Medical School.

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NOTES AND ITEMS

At the Beginning of the Present Year there were no less than two hundred and ten medical journals published regularly in Paris.

Electrolyzing Drinking Water.—There is always something mysterious in the uses of electricity, but the project New York haf undertaken, of purifying 120,000,000 gallons of Croton daily by electrolysis is particularly weired. It is all done with a couple of five horse-power dyuamos and a 1,000 gallon electrolyzing tank.

A New Non-poisonous Disinfectant, Izal.—This substance is of English origin, and the *Lancet* for July 1st states that it has been approved by Dr. Klein, biologist to the Brown Institution. It is derived from an oil that appears as a residuum from coke making at the collieries, especially at those situated at Thorncliff, near Sheffield. As a destroyer of germs, izal takes a higher rank than carbolic acid, but is non poisonous, unless the quantity ingested is very large. Extensive experiments in Dr. Klein's laboratory tend to show that one part of izal in two hundred parts of water is capable of destroying the micro-organisms of diphtheria; scarlet fever, glanders, erysipelas and cholera.

The Iowa State Board of Medical Examiners has passed the following resolution in reference to the recognition of Medical colleges:

WHEREAS, A number of medical colleges in the United States and Canada have adopted and require a four years' graded course of medical lectures as a condition of graduation, and others have expressed the determination to do so; therefore,

Resolved, That after July 4, 1898, no medical college shall be recognized by this Board as "of good standing" within the meaning of Section 1, Chapter 104, Laws 1886, that does not require as a condition of graduation four graded courses of medical lectures of not less than six months each—no two of which said courses shall be within the same calendar year. That graduation from any college of Dentistry, and Veterinary Medicine, or of Pharmacy, upon a satisfactory examination in anatomy, recognized by this Board as of good standing, may be accepted as the equivalent of the first year's course of medical lectures by colleges requiring as a condition of graduation the graded courses above specified.

Anti-Vaccination Cycles and Their Results.—It is curious how these anti-vaccination movements come as it were in cycles. The last great movement was in Germany. Wurtemburg and Baden were the Leicesters of those days, and so effectually did they preach the anti-vaccination doctrine that it found a ready acceptance in all the populous manufacturing districts (*Indian Med. Gaz*). The yearly vaccinations rapidly decreased, and the difficulties in carrying out the regulations became greater everywhere. From Germany the revolt against vaccination spread to Italy, and vaccination held for a time a very questionable position. The victory of the anti-vaccinators was, however, of short duration, for there swept over Germany in 1870, and from thence into other countries, one of the most destructive epidemics of small-pox known in this century, and people learned from a disastrous experience that until more is known concerning the origin of small pox, the only safeguard is vaccination. The most remarkable outcome of this epidemic in Germany was the disappearance of the opposition to vaccination, and those who had been loudest in its denunciation were among the noisiest to demand a law by which not only vaccination but re-vaccination should be rendered compulsory.

The Crook of the Cycle.—The wide diffusion of the bicycle as a means of locomotion (*Jour. of the American Med. Association*), aad as well as an agent of pleasant pastime, has introduced into orthopedic surgery a new factor in the production of spinal curvature. When the wheel came into use, the handles were long and the rider sat upright. The followers of Father Jahn encouraged it, and well informed physicians saw in it a new instrument of physical culture.

The desire for increased speed and record breaking lessened the diameter of the wheel and shortened the handles, so that now you may see on any fine day whole troops of cyclists spinning along with their backs arched over the lever, and as the victim must see where he is going, he raises his chin, and the back of the head approaches the shoulder blades. Thus a double antero-posterior curvature has its foundation laid; constant humping the back could do no less.

It is not intended to convey the idea that cycling should be abolished; on the contrary it should be encouraged, but cycles should be so constructed that the rider may sit upright like a man, and not double up like a hunchback or professional contortionist. In the latest patterns of bicycles we see wherein true scientific physical culture has been made to give way to the demands of the professionals. The amateur should be encouraged, for he rides for health and pleasure; while the professional rides for the money he can win by it. It was professionalism that ruined the Greek gymnasia, and professionalism has now converted a healthful and innocent amusement into a dangerous diversion.

Doctors and to Spare.—It is stated in the *Times* that Paris attracts so many doctors that some go hungry. Complaints of the policy of centralization that concentrates in the capital all the powers of government and nearly all cultivation of the arts and sciences are constantly coming from the provinces. To this policy Paris owes its absolute supremacy over the rest of France, and to it is due the fact that in every political

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crisis the question is not, "What will France do?" but, "What will Paris do?" This, of course, is a most proud and comfortable position—for the Parisians—but as in the case of other forms of glory, once in a while the discovery is made that certain disadvantages and hardships go along with it. Among the severest sufferers from the centralizing instinct, it seems, are the doctors. At the last annual meeting of the Association des Medecins de la Seine, which about corresponds to an American county medical society, it was reported that a constantly increasing number of doctors was each year forced to apply for aid from the treasury of the organization. This, naturally enough, was regarded as a lamentable, even humiliating, revelation, and the statistics which explain the increase of poverty among the medical profession of Paris have attracted much attention. It is doubtful, so attractive is life in the capital to a man of science, and so great are the rewards it offers a chosen few, whether the obvious lesson to be drawn from these figures will be applied to themselves by many ambitious provincials, but with the hope that they might have that effect the society has made them public. It seems that, while the Department of the Seine with which Paris is coextensive, contains not quite a tenth of the total proportion of France, its inhabitants have to support a sixth of all the doctors in the country; in other terms, there is one doctor to every 1,100 Parisians, and in this calculation no account is made either of the unregistered physicians, who, though banned by the law, are numerous, nor of 1,787 of those useful persons whom the French call *sage femmes*, many of whom exercise, especially among the poor, the duties of general practitioners. In 1891, France had 12,324 doctors, and Paris 2419, or a fifth, showing that the situation, bad enough then, is growing worse. So, too, does the fact that from 1886 to 1891 the total number of doctors in France has increased by 324 and in Paris by 231; in orther words, the Department of the Seine has absorbed three-fourths of the increase. Such being the circumstances, it is not difficult to see why many young and unknown doctors, and not a few who are old and no less unknown, should find the struggle for a livelihood too difficult to carry on without assistance from their more fortunate brothers.

The Case of a British Army Surgeon.—The recently settled case of Surgeon Briggs, of the British army, demonstrates therein a condition of affairs which could not exist under the vilest political spoilsman of the United States. Dr. Briggs attended the wife of an English nobleman who had been forcibly subjected to sexual pervert outrages by her husband, while resident in India. The wife appealed to the London Divorce Court and summoned Dr. Briggs from Calcutta as a witness. She obtained her divorce amid universal execration at the vileness of her husband, through whose social influence Dr. Briggs was dishonorably discharged from his position in the army. The Duke of Cambridge, commander-in-chief of the British army, superciliously resented all attempts of Dr. Briggs to secure justice. Appeal to the House of Commons resulted in complete reinstatement of Dr. Briggs, with the declaration that his discharge had been illegal and of non-effect. With such revelations in the British army medical service, with the recent showing that the Marquis of Salisbury and a couple of dukes are able to set sanitary ordinances at defiance by social influence, British criticism on the American spoils system is in decidely bad taste. The mote in the American eye stands no comparison with this beam.—*Medical Standard.*

Ophthalmic Solutions and Their Ready Sterilization.—Dr. Sydney Stephenson has recently presented before the London Ophthalmological Society a set of new eye-drop flasks devised by Dr. Stroschein, of Wurzburg (*N. Y. Med. Jour*). Sterilization by boiling is facilitated by the use of these flasks, in respect of solutions of atropine, etc., that are in daily and hourly use. The flasks are four in number, and vary in color with the different solutions they are to contain. A white bottle is prepared for cocaine, a black one for atropine, a blue for homatropine, and a red one for physostigmine. In addition, the name of the drug is deeply etched on the flask. The cost of a set of these flasks is, in London, less than three dollars. The peculiarity of the flasks consists in their being made of thin glass, so that they do not break under the application of a small flame. A pipette accompanies each flask, the India-rubber cap of which is removed during the application of heat. A wire gauze on a little tripod goes with the set. This supports the flask with its pipette while the solution is being boiled for three minutes over a small spirit-lamp. Solutions that are in constant use should be thus treated at intervals of a few days. To obviate the tendency of these boilings to concentrate the solution, it is Dr. Stephenson's practice to add a few minims of distilled water before each boiling.

A New Source for Catgut.—Dr. Dairo Vigezzi, in *La Medicine Moderne*, describes a new source for animal ligatures. He proposes to use the many long tendons of dogs' tails as his source. After cutting off the tails high up and dissecting the tendons, he subjects them to a carbolic or corrosive preparation for forty-eight hours. He has used them for sutures in enterorrhaphy and on the stomach with success. Its advantages are said to be greater strength and slower absorption than are found in catgut.—Boston *Med. and Surg. Journal.*

The Gunning Prize.—The Victoria Jubilee Cullen Prize, of the value of $500, given every third year by Dr. Gunning for the most important contribution to practical medicine, has just been awarded to Dr. William Russell, Assistant Physician to the Royal Infirmary, Edinburgh, for his work on the etiology of cancer and for the stimulus his work has given to investigations in that field.

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Influenza.—The New York State Board of Health reports a yielding in the epidemic of influenza, which caused during the last few months an increase of about 500 deaths a month over the average.

Dr. A. M. Makejew, late Professor of Midwifery in the University of Moscow, has bequeathed 200,000 roubles ($100,000) for the erection of a church in connection with the various clinics of that University.

Professor Adam Politzer, of Vienna, has been appointed by the Austrian Cultus-Minister, a scientific delegate to the Medical and Hygienic Exhibition, to be held at Chicago in connection with the World's Fair.

A New Biennial Prize.—M. Frederic Chevallier has bequeathed to the French Academy of Medicine a sum which will afford a prize of six thousand francs, to be given every two years to the author of the best work on phthisis and its treatment.

Cholera.—Reports from Cairo show that the cholera, which appeared in Mecca, June 9, is increasing, there being over 200 deaths daily. In Southern France there have been 704 deaths since May, 138 deaths having occurred in Marseilles in the last four weeks.

Dr. S. Pozzi, of Paris, has been commissioned by the French Ministry to proceed to the United States and to study the organization and installation of surgical laboratories and instruments used in the practice of surgery, as well as general questions of the teaching of medicine and surgery.

An Offer to Mind-Readers.—Professor G. Ponchet has offered 1,000 francs to any one who can read a single word known only to himself and enclosed in a sealed envelope. The medium can have an hour to try, and if he fails must pay 25 francs, which sum will be bestowed on the poor.

A Pasteur Institute in the Himalayas.—A Pasteur Institute is to be established in the Punjab Himalayas for the care and study of hydrophobia. Its benefits are to be open to the whole of India, by arrangements to convey patients free of charge, when necessary, from any part of India to the Institute.

Pan-American Medical Congress.—The attention of Delegates and Physicians going to the Pan American Medical Congress, held in Washington, D. C., September 5th to 8th inclusive, is directed to the Big Four Route, in connection with the Chesapeake & Ohio Ry., as the recognized Official Route for this Convention. An extremely low rate has been made. Sleeping Car reservations may be made in advance, and tickets will be on sale at Big Four Ticket Office, Cor. Broadway & Chestnut Sts., and Union Depot. For full information call on, or address, W. F. Snyder, General Western Agent, St Louis, Mo.

RAILROAD NEWS

A Hospital Car to be run in connection with every emigrant train, and in case of the discovery of contagious disease to be switched off and isolated, is a needed improvement which is being urged by eastern health officials. The Baltimore & Ohio, which carries a large immigrant traffic, is favorable to the plan, and the other trunk lines will doubtless also adopt it. The attention which has been directed by the National Association of Railway Surgeons and by other bodies of medical men to the subject of the proper and safe transportation of the sick has been of much value to the public and the railways, and the additional safeguard that would be afforded by a car in which sick immigrants could be separated from the well and properly treated should not be neglected—*Railway Age.*

Special Railroad Rates for the First Pan-American Medical Congress to be held at Washington, D. C, September 5th to 8th Inclusive.—The Chesapeake & Ohio Railway, from Cincinnati or Louisville to Washington, D. C., is the quickest, most picturesque, interesting and comfortable line between those cities. Their trains are vestibuled throughout, lighted by electricity and carry the latest pattern of through first class coaches, Dining-Cars and Sleepers.

The scenery along the upper Ohio and Kanawha Rivers, through the gorgeous and canons of the New River, among the Peaks and Valleys of the Blue Ridge and Alleghaney Ranges and over the fertile plains and historic battle fields of Virginia constitutes a kaledioscopic panorama that for variety, beauty, grandeur and historic interest is unequaled in this country.

Ths rates of fare will be the same by all of the lines and while they have not been agreed upon, they will positively not be more than one and one-third fare for the round trip. The one way rates ars as follows from St. Louis $19.25, Chicago $17.50, Cincinnati $14.00, Indianapolis $16.00, Louisville $16.00.

Tickets will be sold at those places September 1 to 4, inclusive, good to return leaving Washington as late as September 12. Ask for your tickets "via the Chesapeake & Ohio Railway.

If you will advise me what day you will leave any of the places named and whether in the morning or evening and how many berths you will want I will reserve them through to Washington for you.

Write for a copy of "Virginia in Black and White."

E. B. POPE,
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MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

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ORIGINAL ARTICLES

Science in Medicine and Surgery.

BY J. MACFADDEN GASTON, M.D., ATLANTA, GA.

In the early history of the healing art, all the devices used were of an empirical nature, not even suggesting any kind of theory or explanation upon which a resort to treatment was based.

Old records touching upon the various medical and surgical appliances seem so absurd that it puzzles any intelligent physician of the present day to believe that a sane man or woman could have fallen into the delusion to adopt such means of treatment. It is not the purpose of this paper to convict the originators of such means as impostors, nor their victims as fools, but simply to reduce the facts in verification of the extreme gullibility of the human race, as to curative agents. This holds not alone in respect to the past, but also in regard to the present era, and has facilitated the sharp practice of quacks in all ages of the world.

After medicine and surgery emerged from the period in which sorcery and witchcraft dominated the people, there commenced a gradual development of measures founded upon the observation of facts, and the record of experience became the standard for the guidance of practitioners. What proved to give relief in given conditions was regarded as applicable in similar cases, and thus a long array of data was accumulated upon which the *materia medica* has been established under the various classifications of purgatives, emetics, etc.

After the discovery of the circulation of the blood by Harvey, surgery was no longer working blindly as before, and surgical pathology has steadily gained ground, while operative measures have made remarkable advances since that time.

The germ theory of disease has wrought a revolution in the views and practice of physicians and surgeons during late years, which bids fair to place medicine and surgery upon a scientific basis. While there is a vast difference in the opinions of prominent men in the medical profession as to the bacterial origin of disorders, the investigations in progress must ere long culminate in a final adjustment of this question.

That micrococci are associated with the progress of diseases, involving the different structures, has been demonstrated clearly by the microscope; and experiments tend to prove that certain disorders are propagated from one person to another by means of such germs. The modes adopted for testing the introduction of microbes into the system have not afforded any conclusive evidence as to the etiological factor in the development of morbid products. But the observation of bacterologists has gone very far towards establishing the existence of special forms of bacilli in different types of disease. Whether these various modifications of the bacterial order enter as a causative element, or simply as a concomitant of the several disorders with which they are associated, has not been satisfactorily elucidated.

If the investigations should be conclusive in regard to the constant appearence of distinct bacilli in a large proportion of diseases, so as to serve the purpose of diagnosis, it would conduce greatly towards placing medicine and surgery upon a scientific basis. This being attained, the next step to be aimed at is the therapeutic measure, which may prove efficacious in eliminating these morbific agents from the different structures of the body and correcting their ravages in the organs.

A grave point for consideration in connection with the development of bacteria in the physical organization is whether they are hurtful in the living condition or after losing their vitality and acting as ptomaines in the organs. If the analogy of the growth and the decay of hydatids in the tissues can hold in the case of bacteria, it may be inferred that the chief harm results from their death and decomposition.

A very interesting view of the relation of leucocytes to bacteria has been presented by Sutton, claiming that an interminable war is carried on between these infinitesimal antagonists in the organization. If the former prevail health is secured, but in case the latter exert a controlling influence, the result is disease. The object of medical science is to aid the leucocytes.

At this time the medical profession is undergoing a most interesting transition from the extreme views which have been held by some in regard to the employment of germicides in surgical practice. There was a time within the past decade when it was deemed

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to be scientific and progressive to use antiseptic measures of the most energetic kind in all operations, whether there was a septic element to combat or not. But thanks to the mature investigation of the effects of germicides upon normal structures by bacteriologists of the highest order of qualifications for this class of work, it has been demonstrated that these so-called antiseptic agents are capable of setting up septic processes in healthy tissues. The tables are now turned, and instead of a surgeon being compromised by eliminating germicides from his surgical procedures in ordinary cases, and confiuing his irrigation of recent wounds to simple sterilized water, it is he who departs from this course by the employment of solutions impregnated with toxic agents who is held responsible for the con sequences of their absorption. There was a time, and that recently, when prominent members of the pro fession would have gone into a court of justice and testified that another physician or surgeon who had failed to use the so-called antiseptic treatment in a given case had failed to do his duty, if not even liable to a charge of malpractice. But let us consider where this conservative practitioner now stands with the develpment of science in the researches of bacteriology When there is a septic contamination in a part, germicides are indicated for the correction of this vitiated con dition and should be carried no further than requisite for this purpose. But in case there is a healthy and normal state of structures involved in a cutting operation, there can be no indication for antiseptics and their use is only calculated to do harm by absorption, and the best men in the profession have ceased to employ them.

The most energetic, and hence the most likely to cause mischief, is corrosive sublimate. In a paper by Dr. A. Morgan Vance, of Louisville, in the *Medical and Surgical Reporter*, it is stated that three years ago Welch, of the Johns Hopkins University, made a report in which he mentioned numerous experiments with sublimate to find out something about the action and power of this drug. "I think," says Dr. Vance, "it is proven beyond all doubt by his experiments and by those of his attendants, particularly Abbott, that the present position of bichloride is rather against its use, and that it does more harm than good. If the solution be of sufficient strength to have any effect upon germs, already there it will cause necrosis and prevent healing of the wound as well as produce a better nidus for the production and operation of the micro organisms." In the light of these experiments and those of the experiments quoted in this paper it is plain that for use in surgical practice the solutions of corrosive sublimate do not possess the advantages hitherto attributed to them. I may be allowed to refer those who still cling to this idol to the practical remarks of Dr. Vance on this subject, as follows: "Two years ago I ceased he use of solutions, particularly in fresh wounds, and ave lately ceased to use them at all, even in suppurating conditions. I have found in my practical work hat since I ceased the use of sublimate solutions I have had much more uniformly good results by using simply sterilized water."

In my address at the opening of the session of the Southern Medical College in 1888 I made my position clear upon this subject in the following words:

"With the lights before the profession in regard to the cases of poisoning resulting from even the most cautious employment of recognized dilutions of both carbolic acid and bichloride of mercury in surgical dressings I am forcibly impressed with the conviction that they should be discarded in all operations upon normal structures." In the discussion upon aseptic and antiseptic surgery before this Medical Association in 1890 I used this language: "The excessive use of carbolic acid and corrosive sublimate as washes to absorbent surfaces cannot be otherwise than hurtful; and the practical results in setting up disorders of various kinds, with not a few fatal results, should be a warning to surgeons against the unnecessary employment of these agents. With proper safeguards in the use of antiseptics, surgery will reap benefits; but it has received a black eye from extremists, which can only be remedied by caution in the employment of antiseptic agencies, and seeing the danger,let usavoid it .If we have it in our power to employ antiseptic agents free from risk, it is not good surgery to rush to germicides which are found prejudicial to the otherwise healthy structures involved in an operation; and it is high time that the voice of the profession should be raised in tones which cannot be misapprehended against this reckless employment of germicides.

I am happy to record that now the progressive element in surgery has adopted the standard under which I have battled for many years past. Many will doubtless continue for a time to irrigate fresh cut surfaces with solutions of corrosive sublimate, even in the face of a scientific demonstration of their detrimental effects. But this surgical fad cannot any longer exert its sway over the thinking men in the profession, and like the carbolic spray of quondam repute, corrosive sublimate washes will ere long be among the things that were, a schoolboy's tale, the wonder of an hour.

It may, peradventure, appear to some of my colleagues that I am falling into line with the reform which has been brought about latterly in cutting loose from the prevailing practice of the last decade; but unfortunately I am on record in the plainest and most unmistakable terms during all these years as opposing this class of so called antiseptic surgery in the indiscriminate employment of sublimate solutions in operations. While I have been surrounded with colleagues who insisted upon carrying out the measures inculcated by the extremists in this antiseptic craze, I have at all times and under all circumstances kept up a defensive warfare on the line of conservatism. They will all do me the justice to allow that there has never been any concealment of my views, and even at the risk of prejudice to my professional prestige in the college with which I have been associated, my position has been boldly and

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openly asserted in the lecture room and elsewhere as inimical to the septic consequences of washes and dressings of fresh wounds with corrosive sublimate solutions

A theory based upon the claim that all diseases have their origin in the introduction of germs of one or another order, may prove the most satisfactory explanation of the disorders of the physical organization, and should it be made apparent that every special disease has its specific bacillus, science will have made an immense stride in pathology. But when the microscope and other means of investigation shall have demonstrated this as a fact, the more practical and useful discovery of remedies adequate to the destruction or elimination of these bacteria appeals with urgency to the therapeutist; and thus far the bacteriologists have signally failed to point out the curative processes, which may meet the requirements. Much is expected from scientific bacteriology and for one I am anxiously looking for a solution of the problem of curing disease by germicides, in some way, which shall not interfere with the vital functions of organs or tissues involved.

In the meantime, we must not ignore the time honored principles which have brought us safely thus far in arresting the progress of local and general derangement of the system. Prophylaxis is more important than therapeusis and the old hackneyed phrase —that an ounce of preventive is worth more than a pound of cure, exemplifies this fundamental doctrine. Jenner conferred the greatest boon upon mankind in the discovery of vaccination as a security against small pox. Pasteur accomplished a result of no less moment in developing a process of attenuation in the anthrax virus, which put a stop to the ravages of splenic fever. He has in like manner succeeded in so modifying the virus of rabies as to render the canine race insusceptible to this scourge. As a corollary of this demonstration, it has been held that even the human being may be treated during the incubating period of hydrophobia by a gradual introduction of the attenuated virus so as to protect the person from the development of this dreadful disease. More recently an innocent virus obtained by the action of gastric juice upon the spinal cords of rabbits, infected with rabies, has been devised by Eusobio Valli, an Italian physician and utilized by Centanni as an antidote to hydrophobia by inoculation. Even the wide spread fatality of yellow fever has been limited materially in its destructive effects by inoculation with an attenuated virus in South America by Dr. Domingos Freire of Rio de Janeiro.

The outcome of this procedure for mitigating if not preventing entirely the progress of the yellow fever when it prevails is of highest consequence to our southern population. I have been observing this work, as reported through the newspapers of Brazil, and feel confident that it is destined to bring about important results wherever the yellow fever inoculation is adopted. Out of 11,881 inoculatons made by Freire in Brazil, there have only been reported a very insignificant number of deaths, the general mortality being five tenths of one per cent of those who were inoculated. In the meantime the fatality of those not inoculated has been very great.

A sad and striking contrast has been presented among our own people in Brazil by the death of five missionaries from the yellow fever who had not availed themselves of the protective inoculation. In the mean time, one who was inoculated and gave to the world a report of its characteristic influence upon him, has escaped, though frequently exposed to epidemics of yellow fever.

An effort was made some years ago to have a commission of three competent persons sent to Rio de Janeiro by the Government of the United States to report upon the facts connected with yellow fever inoculation. But after the favoroable action of the American Medical Association, requesting the President to send this commission, Dr. J. B. Hamilton of Washington city, succeeded by special parliamentary tactics in having the action of that body rescinded. Dr George Sternberg, of the United States Army, in the meantime was sent to Rio de Janeiro, and, as was anticipated, brought back a report adverse to inoculation.

The most notable feature of the past and present state of surgery, is the independent attitude of the great mass of the profession in saying and doing what each individual thinks best, having no regard for the dictum of authorities as in former days. We may arrive at a correct idea of the status of surgery then and now by consideration of professors in schools of former days as compared with recognition of others at the present day. A review of the surgery of the brain, thorax, abdomen, rectum, genito urinary organs, blood vessels nerves, spine, hip joint, knee and feet of the past with practice at this time, shows vast improvement in all the means of treatment.

It is proper in this connection to advert to the vast increase of facilities for instruction offered by post graduate schools, which were not available prior to the last quarter of a century. If this work was entrusted to experienced men in the different departments, it ought to prove most serviceable to those entering upon the practice of medicine or surgery.

Vis Naturæ.

BY A. M. BALLARD, M.D.,

Buncombe County Medical Society, Asheville, N. C.

Read before the North Carolina State Medical Society, May 9, 1893.

It is with some misgiving that I take your time and offer in exchange so poor an equivalent. What I have to say concerning the relative position which drugs occupy among the various resources of Nature in her efforts to cure disease, was suggested by witnessing all exhibition of "The art of curing disease by expectation or waiting."

"Vis Naturæ et Vis Medicatrix Naturæ." One of

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my medical friends asks, "What is it in English?" Now this is just what I am going to speculate about, and if we can understand what it means in nature, then we know what it is in English, and in very tongue on the face of the earth. If I reply that Dunglison defines it to be a term employed to express that instinctive healing power in animal or vegetable, by virtue of which it can repair injuries and remove disease. Does my friend understand any better the full signification of the term?

We only know a thing so far as we know all its properties, functions, and modes of acting. There has been a great deal of flippant talk about the power of nature to cure, and this talk has been indulged in many times, doubtless, without stopping to consider what nature is, or what are her powers. We believe in the power of nature to cure, and her power also to kill; all powers belong to nature but not always do these forces obey her will. It is only when these forces are disobeying or ore diminished, that we should interfere. There is a class of negative minds who think they must believe what they are expected to believe; who have an excess of veneration or reverence for current opinions of society and the age in which they live. They are so ultra fashionable that they follow the fashions in regard to their belief.

When Symon says, "Thumbs up!" theirs turn up; when he says, "Thumbs down!" down go theirs. They would rather appear to be anything, even a chameleon, than an unfashionable crank. Such persons, and there are many such, will be unduly influenced by expressions of opinion from those occupying high positions, or who are supposed to occupy those positions. The sad effects of such unkind thrusts as these, given by persons from whom I will now quote, we see and feel too plainly in the panicful condition of the public mind and the unwarranted suspicion of medicine. Some twenty-five years ago one of the Boston papers attributed to Dr. O. W. Holmes the remark, "That if all the medicines in the world were emptied in the sea it would be infinitely better for mankind and infinitely worse for the fish."

The New York *Semi Weekly Tribune* of December, 1891, gives publicity to the following:

Professor Alexander H. Stevens, of the New York College of Physicians and Surgeons, says: "The older physicians grow the more skeptical they become of the virtues of medicine, and the more they are disposed to trust the powers of nature, and notwithstanding all our boasted improvements, patients suffer as much as they did forty years ago." And again, "The reason why medicine has advanced so slowly, is because physicians have studied writings of their predecessors instead of nature."

Prof. John Smith, M.D., of the same school, says: "All medicines which enter the circulation, poison the blood in the same manner as do the poisons which produce the disease, and drugs do not cure disease. Disease is always cured by the "Vis Medicatrix Naturæ." And again, "Digitalis has hurried thousands to the grave."

Prof. Alonza Clark, M.D, of the same school, says, with many other condemnations of the methods of the school: "All of our curative agents are poisons, and, as a consequence, every dose diminishes the vitality."

John Mason Good, M D., F.R.S., says: "The science of medicine is a barbarous jargon, and the effects of our medicines upon the human system, in the highest degree, uncertain, except, indeed, that they have destroyed more lives than war, famine and pestilence combined."

How far these unqualified statements are simply the result of a misanthropical and cynical mood, or whether they represent at all the belief of the alleged authors, or what might have been their motive for making the statements here quoted, is of little interest, excepting so far as publicity given such statements purporting to come from men in high authority, may prejudice the public against the system of practice, which we, as members of the great catholic school of medicine, have pinned our faith to, and to the success of which we are devoting our lives. For we, unlike the laity, cannot, if we are honest and have faith in ourselves, be long unduly influenced by the dictum of any one authority, since we owe no allegiance but to truth and fact, and the consensus of opinion in regard to any matter of which the body of average medical men are capable of judging, must determine the truth and settle the question for us. Great men are liable to great mistakes. A single individual, or several, may be deceived in regard to a matter of common observation, but the liability to err is reduced to a minimum by the concurrent opinion of thousands of clear-headed, honest, practical medical men. It might seem as little worth while to argue for a moment on the matter in question, as to spend time in proving the man is in error who says, "The sun does not shine!" or "the world is not round!" I have met only one man during my life, whose sanity was unquestioned, a level-headed, practical man attempted to disprove the rotundity of the earth. How many there are who may have some doubts about the matter, I cannot say, but certainly where there is one who believes the earth is flat, and a few more who don't know what to believe about it, there are thousands and tens of thousands who are either convinced that the drug treatment is an unmitigated evil, or are very skeptical in regard to any advantage to be derived from the drug treatment. We form our opinion of anything by its relative or comparative qualities or position, therefore if our ideal conceptions as the power which drugs possessed to cure disease have raised too high our expectations, when we become acquainted with the real limitation of their power, we estimate them as far below their real value. If, then, it were true (which in a certain sense it is) that men as they grow older, lose confidence in drugs, it is because the active imagination of youth had clothed them with magic and specific attributes which makes real qualities seem as nothing in comparison. That we lose confidence in drugs in one sense may be true, but as one illusion after another disappears as years roll on, we find alas! there are few things in life in which we

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have not lost confidence, at least we have not modified our opinion in regard to. It would be more correct to say that we do not value drugs less, but other things more relatively.

It is important to consider that wherever change may occur in our estimate of any drug or drugs, our confidence in the principles governing the treatment by drugs continues unshaken.

All things are natural inasmuch as they are accomplished by, or are the manifestation of the forces of nature. There is nothing below or above nature but the Supreme. But in speaking of nature we refer more particularly to normal nature, or that which is the result of natural forces acting in obedience to the universal will. Water may run up hill, but when we find it doing so, me know it is natural under the circumstances, but we will find the circumstances to be that it is obeying not the universal or normal will, but a special or abnormal will, that of the man at the pump or engine. Therefore we say that disease is a natural process since it is the result of natural forces, but these forces directed by a will in conflict with the universal or normal will, therefore abnormal, an insurrection against the central authority or nature.

Whether it is better to bear the ills we know or by a presumptious interference to invite those of which we know not! Whether it is better to rely on the efforts of nature, unaided by medicine or art, is now the question. Of course, most persons will say a presumptuous interference by medicine or otherwise is not advisable. But it is a question with many whether any interference by drugs is wise; whether it is not presumptuous to use drugs at all! The belief prevails, to a considerable extent, that as a man grows old in the practice of medicine, his faith in the value of drugs diminishes in the same ratio, since age must necessarily bring experience, experience wisdom, and wisdom knowledge, that drugs do more harm than good. Professing, therefore, to have that knowledge seems to many a guarantee of wisdom, because a lessening faith in drug treatment is what is expected in this age of experience and wisdom.

Drugs are poisons inasmuch as they do not belong in the system, and it is by virtue of their being foreign to the system that they are capable of producing physiological effects acting along those channels and through those organs by and through which they are expelled from the system. But because poison, that they necessarily diminish the vitality, I deny. It is by the active use of any organ or function that its strength is preserved or increased, and even excess or abuse of action within a certain limit, can only lead to some abnormal development of size or strength. These drugs or poisons do not remain in the system, but are soon expelled by some organ or organs, and by the increased functional action of these organs their strength is increased. To be sure the increased action requisite for expelling the poison absorbs some vitality, but vitality is not a fixed quantity, and nature returns the amount expended with good interest. It has been said, "Drugs do not cure disease." What is it to cure? I consider this a relative term; one can cure a little or can cure still more, or can cure until the patient is well. The Irishman who presented his bill for "Curing your wife till she died," was correct in his expression. So far as a drug or person by any means does something for the sick, one that makes it easier for nature to throw off the disease, so far he cures, whether the patient lives or dies. The action of medicine is not so uncertain as might at first appear; any drug having a physiological action can be relied upon to produce that action, allowing that the conditions are present under which it is capable of so acting, but nature is very particular, and before giving the drug, if the conditions under which it is capable of acting are not present, we must first produce those conditions. But whether its action will be curative depends much on our individual judgment. Remember, we are dealing with conditions, and not with names for diseases. Certainly a very large class of what we call diseases, possibly the larger number, ore the result of diminished dynamic energy—the force by which nature governs. That force which preserves and constructs becoming feeble, the destructive or negative force prevails, consequently the degenerative chances so often seen. We believe in the power of nature to preserve, and its power also to destroy, and it is our duty to make the best use of the knowledge we possess, and by every means control and direct these processes. We are relying as implicity on the "Vis Naturæ," even exhibiting in a greater degree our faith in nature by active interference in behalf of the sick one, than by waiting and doing nothing. For it is none the less nature's work because her forces are first transmuted into right thought—natural thought—and then into right action on our part. And moreover, are we not a part of nature?

A doctor stands in the same relation to his patient as a farmer to his farm. We often hear the latter speak of raising a crop, or making a crop. Now, the best farmer cannot make a blade of grass, or hill of beans grow. Nature only can do that—but by studying the ways of nature, and observing the conditions under which the best results are obtained, he can do much in assisting. In the same manner a doctor cannot cure a patient, but by observing the conditions which nature requires in order that she may cure, he can do many things to assist. You don't hear a farmer talk about adopting an expectant treatment in conducting his farm or garden, though you will find many farms and gardens that evidently have been treated according to that wait-and do-nothing system. Man has no right to expect the best results from the operation of nature's laws while closing against her that avenue through which only she can manifest the highest of all powers, "conscious, intelligent thought and action. That avenue, the stupendous achievement of millions of years of evolutionary work which nature has prepared, that she may reveal herself more fully to the world.

The expression "expectant treatment," which means no treatment at all, seems to supply a necessity by ex-

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plaining what we are doing when we are doing nothing for our patient. It seems to cover the unavoidable ignorance of the doctor, or excuse his indolence, and if the lazy farmer cared to excuse his shortcomings he would long ago have used the same or a similar word; unfortunately there are cases to which only the expectant treatment is applicable. But I am sorry to say we too often see cases that are suitable for active, intelligent treatment, when nature is allowed to struggle along alone, the doctor making simply a show of doing some thing by giving a placebo. It is true that nature, unaided, will sometimes bring about a slow and imperfect cure, but handicapped as she is, her work is not so well or thoroughly done, and the after-condition of the patient is far from being as favorable as if nature's efforts had been supplemented by efforts on the doctor's part. Because we believe in the "Vis Medicatrix Naturæ" is no reason why we should stand idly by and neglect to do that which the simplest common sense would suggest, and by doing which we increase the efficacy of nature many fold. Drugs are to the physician what the tools are to the mechanic or artizan, and in dealing with the complex conditions, which we call disease, we select the drug to do one work, and another to do a work quite different. What would be thought of a carpenter should he use a pocket knife to cut a board in the proper length, instead of using a saw? or if he wish to make a smooth, plain surface he should use a hatchet instead of a plane? or if he used a saw, specially adapted to cut at right angle with the grain, for the purpose of cutting the board lengthwise? We should undoubtedly conclude he did not understand that each instrument was specially adapted to accomplish a certain work, and could do the work better than any other. Let us make an application now to ourselves, and use our drugs within the sphere to which nature has adapted them. It is one thing to say we know a fact, and another to realize the full force of what we say we know; to have assimilated that knowledge so that we feel the full force as a motive of action. It is not enough to know a thing is good, but how good? That something is important, but how important? We must discriminate between those matters of minor importance and those of paramount importance; between the principle and auxiliary, otherwise our chief efforts will not be expended where they can do the most effective work for our patients. 'Yes," you will say, "that is what I have always been taught; I know all that." But do we realize the full force of what we say we know? Our actions only will tell.

Let us endeavor to realize what we now know, that disease is not an entity except in some few instances, but is a conflict between the forces of order and the forces of disorder, and when the scales are evenly balanced a feather's weight may turn them in either direction, therefore the importance often times of little things. Let us not despise what seems a matter of small consequence. With our drugs, as well as by other means at our command, we may remove many a gross obstruction which could not otherwise be removed, and this being accomplished the finer forces of nature can do the rest. Our crude mechanical and chemical forces, directed by intelligence, can as well serve a needful aid to nature in dealing with a sick person as in cultivating our farms and gardens.

Much has been said in condemnation of the practice of treating symptoms. Certainly we should try and remove the first cause, when that cause is known and when possible to do so. It has been claimed that many symptoms are simply manifestations of the efforts of nature to cure, and therefore should not be restrained, but we should wait for nature to discontinue her efforts in that direction. Certainly every symptom is natural under the existing circumstances, inasmuch as it is the result of nature acting according to reason or the eternal necessity of the case. Therefore, since natural, or according to nature, the symptom does not constitute the disease. The disease is that which makes it a necessity so to act. It is the primary disturbing element that caused the forces of nature to vary from their normal mode of acting. But although not the disease, and moreover a perfectly natural phenomenon, many symptoms lead eventually to conditions which constitute disease, therefore the wise physicians will continue to treat symptoms, and by so doing hope to break the long chain of cause and effect. Because we cannot, unfortunately, go back to the first cause and remove that, it is no reason why we should not arrest any one or all of the resultant causes. Because we cannot now prevent match from being made that lighted the lantern that in turn set fire to the hay, is it any reason why we should not extinguish the fire in the hay and thus save our barn? Undoubtedly some symptoms are the manifestation of nature's efforts to cure, but it does not follow, therefore, that they do cure or tend to cure. They may be highly detrimental, Nature's forces obstructed in one direction naturally flow towards the point of least resistance, and from being preservative and constructive they may become destructive. Health consists of a ready and willing obedience to nature's authority of every part of the body, from member to minutest cell. While this loyal state of healthful acquiescence continues, nature finds it necessary to exercise but a small part of the power vested in her, and the functions of the whole complex government are carried on without friction and with the smallest possible expenditure of force. This is the "Vis Naturæ" quite sufficient in times of peaceful obedience. It is different, however, when the forces of dissension and destruction, whether arising in the body or assailing it from without, threaten to overturn the peaceful government of nature. She at once brings to her defense her reserve powers drawn from every available source. She exercises all the power vested in her to maintain her authority, and the potential energy in drugs is as much a legitimate resource of nature in overcoming the insurrection in the body, as the latent energy in gunpowder and dynamite when used by a government to repel a foreign enemy, or in

internal dissension to compel obedience to rightful authority. These are the "Vis Medicatrix Naturæ." The science of medicine will appear a barbarous jargon only so far as we fail to comprehend its principles and the grand truth, that we ourselves are a part of nature and that inhering in the developed human mind there is a power which is destined to disclose all truth and bring order out of chaos.

With reverent spirit, though with honest pride,
That thou art part of nature here abide
Midway betwee' the two extremes
Of those who think they're more and those to whom it seems
That they are less than nature.

Here thou may'st hope to happily escape
Some of the sad errors that we sometimes make
When fired by pride, puffed up by self-conceit,
And unsuspicious that we are part of nature,
We make ourselves officious,
Dictate to nature and oppose her will,
Incite her forces to rebellion, and, instead of curing, kill.

We then are like an abscess, boil or wart,
An inflamed spot, excrescence of some sort,
The very things we claim to cure,
And caricatures of nature sure.

No more to be commended, one deficient
In self appreciation, who thinks he's nothing, nature's all sufficient,
For such a one is just as good as any palsied limb or part
His nerves insensate he feels not the quickening impulse of great nature's heart,
His sluggish brain refuses to transmute
The thoughts of nature and to action suit.

Tin-Poisoning.—Dr. W. A. Campbell (*Therapeutic Gazette*) reports six cases of gastro-intestinal disorder occurring in one family in a period of twelve days, one being fatal. The character of the alvine dejections suggested that the trouble was dysenteric. Investigation showed that the source of poisoning was the eating of tomatoes which had been preserved in cans which formerly contained peaches. These cans, having been ineffectually sealed with wax, had been re-heated and re sealed. A chemical examination of the contents of a can revealed a comparatively large amount of tin and a small amount of lead. He concludes:

1. Stannous salts are poisonous to the human system, being similar in their action to the other mineral poisons—lead, zinc, arsenic, antimony.

2. The salts of tin are anthelmintic as well as the powdered product.

3. Toxic doses of the salts produce symptoms similar to those from ptomaines.

4. Canned-food products may contain stannous salts in poisonous quantities.

5. The danger from this source is increased from exposure to the air; hence, all fruits should be emptied from tin cans as soon as opened. The treatment pursued in these several cases was entirely symptomatic—astringent, demulcent, anodyne, or stimulant, as the symptoms indicated. The diet was milk.

EDITORIALS

L. T. Riesmeyer, M.D., Editor.

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TO CONTRIBUTORS AND CORRESPONDENTS.

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Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

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Our Drinking Water and Continued Fevers.

Although the citizens of St. Louis have been cautioned repeatedly to either boil or filter their drinking water, the water supply of St. Louis being objectionable in a sanitary sense, it appears that a great many have not taken the hint. At least in our experience we find that especially the poorer and ignorant classes are drinking water which has not undergone either process and as a consequence we have an increasing number of continued fevers in the city. Some of them are indubitably typhoid, others the so-called simple continued fevers and some remittent malarial fevers. In every case which has come under our observation no precaution had been taken in regard to sterilizing the drinking water and, judging from the experience last fall, when Health Officer Francis was able to trace nearly all cases of typhoid to the water supply from North St. Louis, we are convinced that in the vast majority of cases the fevers are due to our drinking water. Considering that our hydrant water has been found to contain an amount of organic matter which is more than sufficient for the growth of disease germs, and, moreover, that the bacillus of typhoid fever has been found in it, we hold that it is the duty of every physician in St. Louis to caution his patients in regard to the water they drink in order to avoid an epidemic of the same or a larger extent than that of last year.

The writer has charge at the present time of between

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thirty and forty cases of continued fevers at the Alexian Brothers Hospital some of them being distinctly typhoid and but few of the others react upon large doses of quinine and are classed as remittent malaria and simple continued fevers. Whether the last named fever is simply an abortive form of typhoid or a fever *sui generis* is still a disputed question and one that can only be conclusively settled by bacteriological examination of a large series of cases, and since it requires a great deal of time to demonstrate with certainty the typhoid bacillus on account of its great similarity to the bacillus coli, such an examination can only be made by a bacteriologist who can devote almost his entire time to this work. It is to be hoped that in the future, and we have no doubt that this will be the case, every hospital and clinic will have a bacteriologist for similar purposes. In the simple continued fever, which, as already stated, is classed by some as abortive typhoid, we find in our experience an absence more or less of the symptoms which characterize typhoid fever. There is no tenderness in the ileo-cecal region, no tympanites, no diarrhea (as a rule), no roseola, not the characteristic tongue, no bronchial cough, no subsultus tendinum, no epistaxis, there may or may not be headache, no delirium. In some of the cases there is not even a feeling of malaise, excepting perhaps a loss of appetite. The cases last from two to six or more weeks and in some alarmingly high temperatures 106.5° F. have been observed. They show little or no reaction upon the administration of quinine. As to the presence of the malaria plasmodium no conclusive researches have so far been made. In several of our own cases the result of the oxamination has been negative.

That cases of typhoid fever with an exitus lethalis may occur, which intra vitam were not diagnosed as such by good diagnosticians because characteristic signs of typhoid were absent, has been demonstrated at the City Hospital last fall, when the section of several cases in which a high continued fever, without diarrhea and tympanites or any signs pointing to a bowel affection, was present, showed plainly the characteristic lesions of typhoid fever. The atypical course which a great many indubitable cases of typhoid fever took in last fall's epidemic was striking. Long continued high fever 105° F., from the beginning, lasting in some cases two weeks, then the development of the characteristic fever curve of typhoid with other signs of the disease. This must remind one forcibly of a mixed infection. The cases we have had occasion to observe within the last three or four weeks are of a similar nature and one of these has been of particular interest. A young man, æt. twenty-four years, complains of headache, backache, general malaise, loss of appetite, morning temperature 102.5° F. Therap.: forty-eight grains of quinine in twenty-four hours for one day, patient claimed to be well since for five days, was seen by the writer on the third day after his attack, when he had no fever, on the sixth day he again complained and then had a temperature of 105° F., which was the first day reduced to 103° by forty-eight grains of quinine in twenty-four hours, then the temperature varied under the same treatment between 104° and 105°—no morning remissions—for six days. Quinine was discontinued and phenacetine and salol of each two and a half grains every two hours and sponge bath ordered. Gradual decline of temperature with morning remissions. After the sixth day of the second attack of fever characteristic signs of typhoid, roseola, subsultus tendinum, diarrhea, pea soup stools, and tympanites developed. The administration of antipyretics was only continued for three days, the decline of temperature continuing until the twenty-first day after which it remained normal.

In this case the first attack of fever was in all probability due to a malarial infection, the second one was typhoid fever.

With regard to the propriety, at the present time, of classifying all continued fevers that are not of malarial origin as typhoid, as is done, we think, by most authors, we hold that as far as treatment is concerned, this is a wise thing to do, for until bacteriological examination has differentiated the various continued fevers we must always bear in mind that the continued fever, not showing any of the characteristics of typhoid, may after all be such and according to Atkinson, of Baltimore, "most of the new continued fevers that have from time to time been written about are sooner or later relegated to the class of typhoid fever. Typho malarial fever has been definitely determined to be typhoid.(?)In countries where malarial fevers do not prevail we hear of mountain fevers, mucous fevers, gastric fevers, nervous fevers, etc., but sooner or later they have all become classed as typhoid fever." But correctly so? This question cannot be definitely settled until, possibly, bacteriology will determine other causes of continued fevers. According to Atkinson typhoid fever is the great, the almost universal continued fever, yet, from analogy we would judge that continued fevers also occur in consequence of other causes than the typhoid bacillus.

Dr. G. Baumgarten, of St. Louis, during the last 15 years has paid particular attention to a continued fever occurring in St. Louis and vicinity, and has read a paper upon this subject before the Society of American Physicians, in which he takes the standpoint that the fever he describes is, clinically at least, distinct from typhoid.

Our own experience leads us to believe that such a fever does exist, although the absolute proof is wanting. Ehrlich's test cannot settle the controversy and we have to look towards bacteriology to solve the question.

The study of the continued fevers that do not present any characteristic symptoms of typhoid, will furnish a fruitful field for bacteriological research and we would urge those that have the opportunity and sufficient time to devote themselves to the subject. To return to the starting point of this editorial we once more wish to emphasize that the citizens of St. Louis should be urged to boil, (in filtering we have to rely upon the quality of

the filter) their hydrant water, for drinking purposes at least, in order to avoid, if possible, another large epidemic of continued fevers.

The Pan-American Medical Congress.

Judging from the current Medical Literature the success of the meeting of this in a great many respects important congress is assured, and it is to be hoped that everybody interested in medicine and the allied sciences who is able to go will attend. All the countries concerned have appointed official delegates in response to the invitation of the President of the United States, who will open the congress in person. A large number of the colonies and a great many municipalities also have appointed delegates, as well as the medical organizations throughout Latin America.

The Governors of nearly all the States of the Union have appointed delegates to represent the sanitary interests of their respective States. Special interest is centering in the Sections in Marine Hygiene and Quarantine and in Hygiene, Climatology, and Demography, in charge respectively of Surgeon-General Wyman of the Marine Hospital Service, and Medical Director Gihon of the navy.

The American Medical Editors will have a meeting and banquet in Washington on the evening of Monday, September 4, the day preceding the assembling of the Pan-American Medical Congress.

Headache.

For this article by James W. Putnam, M.D., of Buffalo, N. Y., we are indebted to the *Journal of the American Medical Association*. Headache is a symptom arising from such a variety of constitutional and local conditions, that to treat it properly it is necessary to arrive at a just estimate of the patient's standard of health. For no other symptom is it more important to carefully examiue the patient as to heredity and constitutional taint. As to heredity, the inheritance may be direct, or it may be that the neuropathic parents, who may have been epileptic, or insane, or alcoholic, have transmitted to their offspring an instability of the nervous system which, instead of being of the same variety as that of the parent, has manifested itself as headache arising on various pretexts, as fatigue, worry, eye strain, etc.

Having determined the fact of inheritance in a given case, the examination of the patient requires a correct estimate of the constitutional conditions which may be present, whether the patient has been afflicted with syphilis, malaria, rheumatism, its allied condition, lithemia, or arterial disease.

A most careful inquiry should be made as to the digestion aud the condition of the alimentary tract, as in the disorders of stomach and bowels we find a most common source of headache. Indigestion in its various forms and constipation are responsible for a large portion of the headaches of to-day.

An examination of the urine may reveal a diminution of excretion of urea, which often is responsible for headache. The presence of uric acid crystals, of albumen, of sugar, all indicate a line of treatment which must be followed if we would relieve the distressing symptom.

After we have determined the presence or absence of these conditions, we are prepared to study the headache itself, when our inquiry should be directed to the history of this particular symptom, the original attack—under what circumstances did it develop? Often we get valuable information on this point. The first headache may have come on when working in the sun on a hot summer's day. It may have developed after prolonged work at books, in which both brain and eyes are overtaxed. It may have followed a fall In all cases the history of the first headache is of great value, and often suggestive of a line of treatment.

Having a history of the origin of the headache and its duration, the study of its character naturally follows. It may be continuous or intermittent. If the latter, it may occur at stated regular intervals and last a definite length of time, or it may occur at irregular intervals, each attack seemingly following a directly exciting cause, which in some cases may be an over indulgence in eating or drinking; insufficient sleep; anxiety; prolonged mental strain, or prolonged use of the eyes, which may or may not be normal.

Having established its type as to periodicity, the study of the pain and its location must be learned. As to location, it may be diffuse over the entire head, and may appear to the patient to be superficial, but it is more usually described as being deeply seated. It may be localized as frontal, vertical, occipital, or one sided.

Frontal headache we sometimes find due to a gastric cause; to anemia; to fever, and often to prolonged mental work.

Vertical pain is often due to gastric disturbance, as is also occipital.

When, however, we find headaches which are not due to altered blood states, nor to any of the causes to which I have alluded, there is still the great cause of ocular defects. This cause may be operative alone or in connection with some other, but wherever found, whatever it may be, I believe that it should be corrected. Whether the error is one of refraction or of lack of muscular balance it, in my opinion, is a cause which must be removed.

Having now thoroughly examined the headache case, how may we classify it, for upon the proper classification depends the treatment adopted.

Headaches may be either anemic or congestive, toxic, neuralgic, organic, neurasthenic or reflex.

The anemic headache is commonly found among people convalescent from disease of exhausting character; in large numbers of the poorly fed, hard worked young women in offices, shops and schools, and in the young society women of the day. It is usually of the diffuse variety, but it is often more severe in the frontal region and back of the eyes. In cases of chlorosis the

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pain is sometimes very intense. It is not constant, but attacks are easily brought on by exertion or prolonged reading. This latter cause probably operates by reason of the weakened condition of the muscles of the eye, which share in the general poor nutrition of the body. The diagnosis of this type is rendered easy by the accompanying symptoms, which exist in varying degree, of faintness, vertigo, palpitation, breathlessness, dizziness on rising suddenly, and improvement of the head ache by lowering the head and elevating the feet.

The treatment of the anemic condition need not be described here. The treatment of the attack is often successful by giving a diffusible stimulant, as spirits ammonia arom., one drachm, to be repeated if necessary in one-half hour. Sulphate of quinia in five or ten grain doses often is effectual in arresting the pain or at least in moderating it.

The congestive headache affects the whole head. It occurs often in school children. It is rarely due to overwork—more often to gastric and intestinal causes. The pain is throbbing, increased after meals, and is usually worse in the latter part of the day. Sleep is often tardy, and when it does come it is often disturbed by bad dreams. The patients are as a rule all children of neuropathic ancestry, and are liable to suffer from other diseases, as epilepsy and chorea. As a rule they are dull at school, or else bright in some things, dull in others, irritable on the play ground and changeable in their moods. Such patients, it should be remembered, are always in danger. It is possible that these headaches, in a limited number of cases, may be forerunners of more serious mischief—tubercular meningitis. These children should be taken out of school and the entire attention be given to making good active physical beings, not intellectual prodigies of them. They should be given a system which they are to carry out most religiously. This should include mild gymnastics, cold sponging, salt water rubbing, outdoor plays, but particular care must be taken that the child does not become exhausted, and to that end I make it a rule to order that the child come in at four o'clock and rest an hour. In many cases we find such cases are best treated by the mixed bromides, five to ten grains, t. i. d., for a few days only.

Regulation of the diet, which should include avoidance of sweets, prevention of over eating, the giving of fruits, and attention to the bowels, should complete a cure.

In adults, congestive headaches more frequently occur in men and are often due to frequent wining and dining. The head pain is described as being a feeling of fullness a throbbing, beating head. The treatment by blue pill and salts, with dietary restrictions, is effectual in curtailing the duration of the attack. A full dose of bromide of potash, or of one of the effervescent salts of caffein or antipyrin often relieves the pain. The English gentleman prescribes for himself on such occasions the juice of half a lemon in a glass of apollinaris water.

There is also the congestive headache due to prolonged brain work. It is perhaps needless for me to remind you that when an organ is functionating it requires more blood than when at rest, and that after prolonged mental work there sometimes is a passive cerebral congestion. This is seen in lecturers, ministers, jury lawyers, and students cramming for examinations. It is usually accompanied with restlessness, general fatigue and insomnia. The patients complain of a feeling of pressure on top of the head. There is also dizziness, ringing in the ears, and photophobia. If the attacks are frequent there gradually develops a capillary dilation, due to the frequent active hyperemia, and then a chronic congestion may occur, and we then have a chronic headache most difficult to cure. These headaches are made worse by the worker taking stimulants as a spur to the flagging energy.

My treatment of these cases is, cessation of work where possible; first thing in the morning before rising a cup of black coffee; a spinal douche, 40 degrees, at ten or eleven o'clock

℞ Tinct. nucis vom. - - - - ℥j.
Elix. gent, - - - - - ℥ij.
Acid. phos. dil., - - - - ℥j.
Elix. pepsin, - - - - ℥ij.
M.

Sig. A teaspoonful in water three times a day.

If the heart is flagging, give a little digitalis. At night I have them take a sponge bath with cold salt water before retiring, well rubbed, in order to stimulate the peripheral circulation, and deplete, if possible, the engorged cerebral circulation. If, after being in bed one hour they do not sleep, I give

Ergot, - - - - - ♏xxx.
Pot. brom., - - - gr.xxx to lx.

In the congestive headache of old people I have had some good results from continued small doses of ergot. In some chronic cases which have yielded to no other treatment, potassium iodid in 15 to 20 grains a day relieves the severity of the pain.

In the headache occurring at the menstrual period in which the pain is frontal, extending from the root of the nose over the eyes to the temples, Dr. Glasgow of St. Louis, reports that in a number of cases he has given immediate relief by pricking the congested cavernous bodies, and thus causing free local blood letting. This I have never tried, as it requires some manual dexterity which I do not possess.

The syphilitic headache is marked by great violence. The pain is usually verticel and may be diffuse or localized. Its characteristic accompaniment of scalp tenderness and nocturnal increase of pain make the diagnosis sure enough to warrant questioning the patient as to his personal history, and to treat him antisyphilitically, even though we meet with a denial of specific disease.

I have not found as prompt results with small doses of mercury in these cases as I have with doses of potass. iodid of from 15 to 20 grains three times a day. This may be due to the fact thot the majority of my cases have had the headache as a late symptom.

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The headache due to cerebral growth, the toxic headache, arising from the use of drugs, the headache occurring in the course of acute febrile diseases, of which typhoid fever and la grippe are examples, the headaches which occur in rheumatic, gouty and lithemic subjects form a group, the treatment of which is a part of the treatment of the disease of which it is a symptom, and will not therefore receive special consideration here.

The headache due to reflex causes, chief of which is some eye defect, are to the general practitioner of the most baffling character. This is so because, even though the patient is asked if there is any trouble noticed in using the eyes, we often are answered: "No, my eyes are perfectly strong. I can see perfectly." An examination with the test type, which is the only way we who are not oculists have of examining the eyes, often reveals what we estimate as normal, or near enough to normal vision, and then we dismiss the eye question from the case. Or perhaps the patient may be wearing glasses, and will mention the name of some well-known oculist who fitted the glasses, and pronounced them correct. The general practitioner must indeed be bold who will persist in clinging to the idea that there is still an unsolved ocular problem. But my experience with rather a large number of patients of this class has forced me to the conclusion that oculists may differ in their mathematical calculations as surely as we will differ in our prescriptions for dissase. It is not uncommon to have a patient examined by two different competent men, and receive different glasses from them. This, I believe, is not always because the measurements taken differ, but because oculists differ to the advisability of giving full correction or only a partial correction. What may be the correct view to be taken in case of fitting glasses for correcting defective vision unaccompanied by nervous symptoms, is not within my province to say, but in those cases in which the defective eyes are accompanied by headache, I am convinced that in the very large proportion of chronic cases the error must be fully corrected, and corrected after the use of a midriatic before we can eliminate the eyes from the case.

In reference to the cases in whom we find loss of muscular balance, we must wait for the decision of the oculist as to the relative value of tenotomies and prisms.

In the cases due to ocular defects which have existed for a long time, the patients will as a rule require treatment for a considerable time after the proper correction has been made.

After a careful study of all headache cases, there still remains a considerable number in whom we can find no ascertainable cause, and where we meet with but little success in treatment. It is these cases that give the general impression that headaches cannot be cured but must be endured. It is also in these cases that we must be endured. It is also in these cases that we must avoid recourse to the hypodermic or other use of morphia, for they become habitues only too easily.

Leaving out those cases in whom we can find no definite cause, I believe that by careful study of individual cases a large majority can be greatly improved, if not cured.

ABSTRACTS

Treatment and Cure of Lepra Tuberosa With Europhen.—Dr. Julius Goldschmidt, Madeira, in *Therapeutische Monatshefte*, April, 1893, says:

The attempts to institute a rational treatment of leprosy by internal or external remedies have been characterized thus far by so unsatisfactory results that most physicians practicing in countries in which leprosy prevails have come to regard all therapeutic measures under the condition hitherto existing as hopeless. On the other hand we observe in the unimpeded course of this disease certain circumstances which should constantly impel us anew to a judicious effort to influence single symptoms if not the entire disease. These circumstances are the arrest in the development of the cutaneous thickening continuing for many months and even years, or the complete remission in the appearance of new eruptions for a long period, the atrophy of the nodules, (attended of course with the pronounced destruction of large areas of tissue) the extraordinary resistance to the disease manifested by the organism or some of its parts such as the scalp, the extensor surface of the extremities; further that the observation that this affection never appears as an acute one but that the affected areas are only the seat of an acute inflammation and finally the therapeutic experience which I was the first to make with tuberculin (All my cases treated with tuberculin, see my article on "Leprosy and Madeira 1891 F. C. W. Vogel Leipzig, became soon worse after initiation of this treatment. In the case of a child ten years old a real facies leonina had developed from the isolated patches in less than two years. This is the more remarkable since prior to puberty the course of leprosy is usually very chronic.) that it exerts a specific influence upon the nodules but unfortunately only causes a temporary retrogression. All these facts urgently impel to new therapeutic experiments. In estimating the result obtained from the treatment of leprosy, we must of course be reserved, for as already mentioned a remission of long duration is frequently followed by a paroxysmal, sudden further development of the affection. During periods of many months I have measured certain nodules and patches in the most accurate manner without detecting even the slightest difference in size until suddenly without any external influences they began to grow and within three to four weeks had attained to double their previous dimensions, or in the same inexplicable manner new foci developed at a greater or less distance. This observation was confirmed by means of photography which permits an accurate measurement of the projected nodules. Indeed one finally reaches the conclusion that leprosy produces local foci at some orifice on the skin or a mucous membrane (nose). These spread slowly along certain routes avoiding as long as possible the regions of the body where the skin is tense (such as the skull and the ex-

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tensor surface of the extremities.) This pronounced tendency to commence as a local affection and to remain local during its entire course extending over many years and even decades is an important indication of the possibility of influencing and even curing the disease by local means. I have never observed an acute leprosy resembling an acute miliary tuberculosis or an acute disease produced by absorption of the metabolic products of the bacilli. Every focus undergoes its own process of evolution. Death is brought about by the complications and scarcely by the disease per se since the vital organs are seldom attacked or only at a late period. Whether the chronic pulmonary phthisis so frequently observed at least in Madeira is of leprous or tuberculous character I will not attempt to decide.

In view of this position of clinical observation the lea suggested itself to extirpate the isolated nodules at the beginning of the disease and in this way to arrest the spread of the infection. The total extirpation of small nodules is unattended with difficulty; the wound cicatrizes rapidly ond no appearance of leprosy manifest themselves at this place for a long time until finally new eruptions develop around the scar in its vicinity. Long before surgical treatment was resorted to it had been customery to employ local means consisting in inunctions of various substances among which chaulmoogra oil enjoyed the best reputation. As a rule however, other remedies were administered internally at the same time. All such experiments I have made during a long series of years without any real or permanent results. For this reason I have sought to find a new remedy, a new method of treatment.

Among all the local remedies employed against the tubercle bacillus, which is so closely related to the organism of leprosy, iodoform has probably given the most satisfactory results in tuberculosis of the joints bones and glands. Its employment in leprosy com mended itself for many obvious reasons. I was soon compelled however to refrain from its use on account of the general disturbance it occasioned such as elevations of temperature which became dangerous on account of the wretched and feeble condition of the patient. Europhen (I am greatly indebted to the Farben fabriken Vorm. Friedr Bayer & Co. Elberfeld who placed the remedy at my disposal. A quite extensive literature exists relative to the chemical constitution and therapy of the remedy, in most of which a favorable opinion is expressed.) appeared to me a harmless substitute rich in iodine (28 per cent) which probably is the sole effective element and in my further experiments I made use exclusively of Europhen. My observations were made in five cases and extended in four over a period of eight months and in one case (which was cured) over fifteen months. The remedy was employed to the exclusion of other measures while the patients ıanner of life remained unchanged. I first treated adanced cases of Lepra Tuberosa in order to form an lea of the manner of application of the remedy and its ction upon certain nodules or diffuse thickenings. If a pronounced effect followed then the treatment must be energetic either by continuous application of the Europhen both during day and night or by introduction of the remedy into the nodule itself. In experimenting with the injections of the remedy I was actuated by the thought that it might be possible to effect an immediate curative result, and at the same time I tried to increase the tension within the nodules to a maximum; for as already mentioned regions where the skin is tightly stretched remain intact as a rule or at least for a long time. And one also observes an involution of the tumors as soon as they have attained a certain degree of development and consequently a certain degree of hardness. In order to convince myself of the inoccuous character of the remedy I employed at first a few subcutaneous injections of a 3 per cent solution in oil which were well borne in amounts of one centimetre (a syringeful) without producing a local or general reaction. The strength of the solution was gradually increased to 5 per cent.

Case 1. Alexandrina Rosas, aged forty-eight years coming from one of the villages of the southern coast. Parents are not leprous, a sister, a male and female cousin had died of leprosy. Patient is married and had eight children two of which are still alive and not leprous. She had lived thirty years in Demcrona British Guaya has been sick seven years and returned to her native place three years ago. The disease has invaded almost the entire cutaneous surface and the mucous membrane of the pharynx and larynx. A five per cent solution of Europhen in oil was injected into the degenerated skin of the arm at different places. No improvement was noted at the end of three weeks. The leprous infiltrations opposed a considerable resistance to the injections which for this reason could be practiced only slowly drop by drop at various places until the skin became tense and further introduction of the remedy was impossible. The absorption of the oil required at the very least three days and some time eight and on this account a number of infiltrated patches not too far removed from each other were subjected to this proceeding. Owing to the incredulity which the patient manifested toward any kind of interference the treatment was suspended at the end of three weeks. The leprous lesions were not affected in any manner. I would remark here that no formation of abscesses occurred in this case, or in any of other cases; of course all the injections were made under aseptic precautions.

Case 2. Pedro Peleiro (see illustration and history in the article on "Lepra in Madeira" already referred to.) This far advanced case will only serve to emphasize the harmless character of the treatment. After it had been kept up for seven months the proceeding disease continued; several of the nodules had become flatter, but at the present time, almost a year after commencement of the treatment a change for the worse has manifested itself.

An attempt now was made to select cases in which the

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nodules were slowly circumscribed and to continue our experiments on these.

Case 3. Silva, aged nineteen years coming from the northern part of the island. Had been sick eight years. Father died of leprosy. Facies Leonina present. On the extremities circumscribed nodules, chiefly isolated varying in size up to a pigeons egg. Over each olecranon isolated tumors of the size of a cherry which seem especially adapted for the experiment. These nodules were injected as frequently as possible, usually every third day with the largest possible quantity of Europhen Oil five per cent. At the close of the small operation the originally doughy nodule felt hard and tense. After six months of treatment the nodules had decreased to one third of their original size. At the present time eight months later the nodules have not enlarged although the disease has slowly advanced.

Case 4. Isabel Gowsalves Serras, aged twelve years coming from the western part of the island (see l.c. page 2q) In this case there ensued after the tuberculin treatment which at that time was not followed by visible results, whether favorable or unfavorable a subacute exacerbation such as I have observed only at the time of puberty which in the mentally and physically backward children is much delayed. At first subcutaneous injections in the vicinity of the infected areas of skin was tried for six weeks but without success. Later the nodules were treated as in case 3 the treatment being continued for five months. The nodules slowly decreased in circumference and at the close of the treatment were of about one half their original size the disease progressed rapidly so that after six months the nodules treated on the arms and legs had attained their previous size.

Case 5. Maria Julia. (illustration and history l. c.) The disease was characterized by the formation of nodules on the left angle of mouth the left side of the upper lip, the chin, the right eyelid, the point of the nose, and on the right upper and lower extremity. To secure as lengthy and uninterrupted treatment as possible the injections were discarded and about fifteen months I began to treat the degenerated leprous patches and their vicinity with inunctions of five per cent Europhen Oil. Thrice daily all the thickened and suspicious areas of skin were gently rubbed with oil for a period of five minutes. Any oil remaining on the skin after the inunction was not removed so that the parts were kept in contact with the remedy day and night. It was also introduced into the nose three times daily. The patient continued the treatment conscientiously for ten months interrupting it during the latter part of her pregnancy and during the four weeks following the birth of her child which was vigorous and healthy. The result of this treatment was truly astonishing although I had been previously acquainted with the action of Europhen in weakening if not destroying the entire bacilli. As early as four weeks after the application a decided improvement could be noted. The swollen upper lip, the thickened eyelid diminished in size the intense redness subsided and the patient could open her mouth more readily and widely and pucker her lips more tightly. The affected patches of skin on the extremity show signs of improvement. Without entering into the details of the slow but steady progress toward recovery I will only report the ultimate result of fifteen months treatment. The eyelids are perfectly normal so that the original site of the disease can no longer be detected. The large leprous area on the upper lip and angle of the mouth and the smaller one on the chin are completely cured; the skin can be lifted up in folds is of a light brownish hue, and somewhat depressed toward the periphery; bacilli can no longer be detected in it. The point of the nose alone is still somewhat reddened and swollen; here also no bacilli are present. The leprosy of the lower extremities has been perfectly cured; at the former situation of the disease the skin is of a brownish color but has a healthy feel and contains no bacilli. The general condition of the woman is excellent, and was never disturbed during the long course of treatment.

I will nevertheless continue the treatment for an indefinite period. At any rate a sufficiently long time had elapsed to warrant me in regarding this case whose constant advance I had observed for a number of years as influenced therapeutically or even cured by the remedy. During a period of twenty-five years observation of leprosy, such a result, such a decided cure has never occurred notwithstanding all the pains and care I have taken in the treatment. Indeed I would say that a case in which a cure has been affected has never come to my knowledge.

Accordingly this case although an isolated example, seems urgently to demand of us to use the same remedy and the same method in other cases, the more so since the injections into the nodules also exerted a distinctly favorable effect. I would exclude the cases of extensive degenerations of the skin in as much as the surface to be treated is too large. Symptoms of iodoform poisoning might be produced and besides this deep and extensive changes of the mucous membranes are present, which cannot be rendered accessible to treatment.

The treatment by means of injections is more painful than that by inunctions but has the advantage of not making as many demands upon the patient whose frequently low intelligence renders him incapable of independent action. The patients should be under medical supervision.

Note: In the course of the above therapeutic investigation I also made experiments with pyoktanin which was injected into the leprous nodules in sulutions up to 1 per cent. In as much as the other observers have expected to obtain curative effects from the parenchymatous administration of the aniline dyes as for instance in cancer I thought it possible to exert a healing action in leprosy by staining the cells and bacilli in corpore vivo. It is an easy matter to demonstrate the coloring. All that is necessary is to fill a small nodule as much as possible with pyoktanin and then extirpate it for ex-

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amination. The experiments which were continued for five months gave no curative results; the nodules remained of the same size and the disease was not influenced locally or otherwise.

Treatment of Loss of Sexual Power by Ligation of Veins.—Alfred King, M. D., writes in the *Boston Med. and Surg. Journal*: The loss of sexual power, or rather deficient erections of the penis, render so many men miserable mentally and physically, that any new method of treatment promising a radical cure merits investigation and trial.

Three immediate causes of deficient erections may be specified. Destruction of the erector muscles, loss of nerve power, and a change in the circulation. The first of these is so rare and so easily determined that it needs only a passing notice. The second cause, loss of nerve power, seems to me to have received more prominence than it deserves, as it is the basis on which almost all treatment is founded. While its force in many cases is undisputed, yet the frequent failure of treatment based upon it leads me to direct attention to the importance of the third cause, that is, a change in the circulation. This change takes place in the veins, especially those which do not pass beneath the pubic arch, or are not acted upon by the erector muscles. Repeated engorgement of the penis renders their calibre larger and, consequently, there is a more rapid escape of blood through them. When, therefore, an erection takes place, it cannot be maintained on account of the escape of blood through these channels. Thus we have the history of a gradual shortening of the duration of erections, and, finally, scarcely none if any, as these veins grow larger.

The remedy for such a condition, especially when far advanced, is not in the use of drugs, but may be brought about speedily and safely by the ligation of some of the larger of these veins.

The following case is given to illustrate this cause and its successful treatment:

Mr. M., aged 35, a laborer of powerful physique, came to me about a year ago with the following history: For several years he had been losing the power of maintaining an erection, during the past year its duration having been so short that sexual intercourse had been rendered impossible. There was a loss of sexual desire and great mental depression. Excessive use or abuse was the cause of this condition.

I gave all possible encouragement to the patient; advised total abstinance from sexual intercourse, cold baths (especially to the spine and external genitals); prescribed bromides, cannabis indica, cantharides, damiana, phosphorus and salts containing it; pushed strychnine as far as it could be borne; gave various tonics; used electricity; and, in short, tried everything which offered any hope for success, but all to no effect so far as producing any stronger erections was concerned.

Careful study of the case convinced me that the immediate cause of the trouble was a physical one, due to a leakage, as it were, or to a too rapid escape of blood from the penis when erected. I, therefore, determined to ligate a couple of the larger subcutaneous veins at the base of the penis and watch the effect.

This was very easily done by the use of cocaine. A vein on each side of the penis was exposed, ligated in two places and severed between the ligatures. A dressing was lightly applied and held in position by a strip of adhesive plaster placed longitudinally. The result was immediate. In less than five minutes after leaving my office he had an erection. That night he was awakened by a powerful erection which made the bandage so painfully tight that he was obliged to jump out of bed onto the cold floor to subdue it. Primary union was prevented by the frequent erections, but the success of the operation was certain.

Two months later he reported himself well, mentally and physically; his sexual appetite had returned, and since the operation, his power of maintaining erections had been as good as ever.

Ehrlich's Urine Test for Typhoid Fever.—George M. Beringer (*Boston Med. and Surg. Journal*) has made a series of experiments to discover to what extent various substances are likely to interfere in this reaction; especially those which from internal or external administration are apt to appear in the urine, or are known to be normal or abnormal constituents. In the experiments one per cent. aqueous solutions were used where the solubility would permit, otherwise saturated solutions.

In applying the test, the author used the contact method, and the following modification recommended by Dr. Simon of the Johns Hopkins Hospital: "Solution 1, a saturated solution of sulphanilic acid in five per cent. hydrochloric acid; solution 2, a five per cent. solution of sodium nitrate; forty cubic centimetres of solution 1 is mixed with one cubic centimetre of solution 2, and an equal amount of urine is added and mixed. One cubic centimetre of ammonia is now carefully run down the side of the test-tube; at the junction of the two liquids there will be observed a ring of the characteristic color varying from an eosine rose to a deep garnet red."

Neutral liquids, such as alcohol, methyl alcohol, acetone, aldehyde, paraldehyde, ether, chloroform and turpentine were found to have no effect. The mineral acids and their salts, and organic acids such as lactic, oxalic, acetic, tartaric and citric acid and their salts, also gave no reaction. Salicylates and benzoates gave an orange-colored reaction, the line having a distinct green tint.

The following alkaloids and neutral principles gave also no reaction: quinine, strychnine, cinchonine, cinchonidine, morphine, codeine, cocaine, atropine, caffeine, salicin, piperine, propylamine and phenactine.

Upon adding a few drops of a one per cent antipyrine solution to the mixed reagents, there is produced at once the well-known green coloration produced by this

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substance with nitrates. The supernatant ammonia assumes a yellow color, separated sharply from the green solution by a brilliant red line.

Urea, uric acid, glucose and saccharose were all found to have no effect. Albumen gave an orange to a red line, depending on the amount present; two drops of a one per cent. solution gave a reddish orange reaction, which became a distinct red on increasing the amount of albumin. While pepsin gave but a green line, the addition of a very small quantity of peptone resulted in the production of a distinctly pale red line. The most minute quantities of phenol and creosote gave a dark red at once, and a single drop of a one per cent. phenol solution gave a reaction identical with that obtained from typhoid urine. Sulpho-carbolates of sodium and zinc gave a pale eosine red line, gradually darkening. Beta-napthol gave a brilliant magenta color and resorcin a dark reddish brown at once. Thymol and eugenol likewise produced the red line. Gallic acid and pyrogallol produce a dark red, the entire layer of ammonia quickly assuming the same color. With tannic acid the reaction is peculiar. The mixed test solutions assume an orange coloration and the ammonia becomes red, a green-colored line sharply making the srparation.

The author, in accord with others, questions the claims that have been put forth for the value of this test. While the absence of the reaction may indicate the absence of typhoid, the presence of the reaction does not warrant the diagnosis of typhoid unless supported by other evidence, as many of the substances producing the reaction, notably phenol and peptone, may be present in the urine from other causes.

The Treatment of Chronic Valvular Disease of the Heart.—Dr. James Tyson (*Amer. Jour. of the Med. Sciences*) notes the relief obtained from the occasional use of purgatives—five to ten grains of blue mass, followed by a saline, or the continuous use of small doses—one-half to one grain thrice daily. In regard to digitalis, the suggestion is made that the greater apparent effect of the infusion is due to its use in larger dose, although it is likely to be better borne by the stomach. Strophanthus, better borne by the stomach, has been used in doses of ten minims every two hours for forty-eight hours without interruption. Caffeine in three-grain doses every three hours, in mitral regurgitation, is admirable, but is likely to produce insomnia. Sparteine in one-quarter, increased to one-half grain dose, three to five times daily, is valuable if a diuretic effect is desired. For irregularity of heart action and palpitation, which are more common in mitral disease, belladonna is a very useful remedy. A belladonna plaster placed over a palpitating heart is one of the most efficient agents in subduing it; nitro glycerin, one-hundredth of a grain, increased to double the quantity, three times daily, is often very useful to the same end.

Xanthoma Diabeticorum.—Mr. Malcolm Morris and Mr. J. Jackson Clarke publish notes of a case of xanthoma diabeticorum (*British Journal of Dermatology*). They consider that there can be no doubt that the affection is fundamentally of the same nature as the other conditions which have been grouped together under the general name of "xanthoma," excluding the xanthoma of Balzer. They sum up as follows certain clinical and anatomical points of difference between xanthoma and xanthoma diabeticorum.

1. While xanthoma (planum and multiplex) is slow in evolution, and generally permanent, xanthoma diabeticorum appears suddenly and subsides almost as suddenly.

2. Xanthoma planum invariably begins on the eyelids, and is usually confined to them; xanthoma multiplex affects chiefly the flexor and extensor surfaces of the limbs, the eyelids, and the palms; the diabetic variety for the most part attacks the neck, trunk, and extensor surfaces of the limbs.

3. Jaundice is a very frequent accompaniment of ordinary xanthomain adults, and diabetes mellitus has never been recorded as occurring in association with it; the reverse is the case as regards xanthoma diabeticorum, in which saccharine urine is a constant feature, and jaundice is an unknown complication.

Ectopic Pregnancy.—Smith (New York *Jour. Gyn. and Obst.*) reports an interesting case of a II para (first child dead when born), to whom he was summoned on June 4, 1891. Patient had been seized with a terrible pain "weeding a flower-bed." She located this attack in the right iliac region. During the following weeks she had repeated attacks, until August 22, when she died. At the autopsy a mass the size of an orange was found in the right iliac region, involving the Fallopian tube and broad ligament. At one point of this mass the wall had become so attenuated that rupture had taken place into the peritoneal cavity. During the early history of the case some doubt had existed in the minds of the author and his consultants as to the character of the trouble, so that an operation was not considered justifiable.

Eclampsia and its Treatment.—Martin (*Edinburgh Med. Jour.*) reports a case of eclampsia occurring in a mill worker, twenty-one years of age. Family history good. Patient had complained of headache, especially in the morning. Labor was induced, and patient was delivered of a healthy child. The attacks occurred every twelve to sixteen minutes, and terminated fatally at the end of twenty-four hours. During the night preceding death the breathing was stertorous, and six hours before death Cheyne-Stokes respiration set in. No post-mortem could be obtained.

Porteous (*Edinburgh Med. Jour.*) advances the theory that there are five forms of eclampsia: (1) Hysteric, (2) epileptic, (3) uremic, (4) apoplectic, (5) microbic. In the microbic there are none of the signs or symptoms of ordinary eclampsia. The kidneys are not at fault; temperature varies little, and the pulse neither quickens nor becomes slower for any length of time.

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MEDICAL SOCIETIES

The Pan-American Medical Congress.—The program of the Section on Pathology is as follows: Special attention of the profession is called to the practical demonstrations in Pathology, Photo-Microscopy and Bacteriology.

One session devoted to a formal discussion on the subject of cancer to be opened by Dr. Wernicke of Buenos Ayres, and, as co-referee, Prof. Allen J. Smith, of Galveston. Papers on this subject have been promised by Dr. Joshua M. Van Cott, Honorary President of the Section, and Dr. Joseph McFarland of the Advisory Council.

Another session will be devoted to Yellow Fever, the discussion to be opened by Drs. Acosta and Grande, of Havana, Cuba, and as co-referee, Dr. A. J. Amades, of Puerto Rico, Honorary President.

One day, two sessions, will be devoted to Practical Demonstrations, as follows:

Dr. James E. Reeves, of Chattanooga, of the Advisory Council: Practical Demonstrations of the Methods in Pathological Histology.

Dr. Wm. M. Gray, of the Army Medical Museum: Practical Demonstration of the Methods in Photography applied to Pathology.

Dr. J. J. Kinyoun, Q. A. Surgeon U, S. Marine Hospital Service: Practical Demonstration of Methods in Bacteriology.

Papers have been promised as follows:

1. Notes on Three Years' Work in the Pathological Laboratory of the Charity Hospital of New Orleans, by Dr. Henry Dickson Bruns, of New Orleans.

2. Medical Geography of Puerto Pico, by Dr. A. J. Amades of Puerto Rico.

3. Theories of Inflammation, by Dr. Sose Torres Matos, of Havana.

4. On Inflammation, by Dr. E. O. Shakespeare, of Philadelphia.

5. On Cholera, by Dr. Herman M. Briggs, of New York.

6. L'etat de Hyperexcitabilite du Nerf Phrenique, dans le Beribiri, by Dr. J. B. de Lacerda, of Rio de Janeiro.

7. Paludismo, by Dr. A. J. Amades, of Puerto Rico.

8. Bacteriological Observations on the Waters of the Harbor of Havana, by Drs. Acosta and Grande.

9. Observations on Malaria, by Drs. Coronado and Madua.

10. Operations of the Anti-Rabic Laboratory in Havana, by Dr. Acosta.

11. Abscess of the Liver, by Dr. James E. Reeves, of Chattanooga.

12. On Influenza, by Dr. Ramon Guiteras, of New York.

13. Observations on the Brains of Feeble Minded Children, by Dr. Henry W. Cattell.

14. Pathology of Pelvic Inflammatory Trouble, by Dr Joseph Price, Philadelphia.

Papers have been promised, without giving the subject, by Prof. Wm. H. Welch, of Baltimore; by Dr. W. J. Councilman, of Boston; and by Dr. G. F. H. Nuttall, of Baltimore, and Drs. Wm. Hughes and W. J. Carter, of Philadelphia.

John Guiteras, M.D., Executive President, Philadelphia, Pa.; David Inglis, M D., English Speaking Secretary, Detroit, Mich; L. F. Criado, M.D., Spanish-Speaking Secretary, Brooklyn.

The Association of Military Surgeons of the National Guard of the United States.—We are indebted to the *Journal of the American Medical Association* for the following abstract of the proceedings of the third annual meeting (first day—morning session) of this Association, held in Chicago, Ill., August 8, 9 and 10, 1893:

The Association met in the upper amphitheater of Rush Medical College, and was called to order by the President, Dr. Nicholas Senn, of Chicago, at 10 A. M.

In the absence of the Rev. H. W. Thomas, Chaplain of the Illinois National Guards, prayer was offered by Bishop Samuel Fallows, of Chicago.

President Senn then introduced the Hon. Carter H. Harrison, Mayor of the City of Chicago, who delivered one of his happy and characteristic addresses of welcome.

Dr. Truman W. Miller, of Chicago, addressed the members on behalf of the local medical professsion. He said, aside from presenting them with the active scientific work in our institutions, we had to show them in our glorious White City, conceived by the wizard's brain and built by the touch of the magicians wand, exhibits from all nations of the latest appliances, methods and preparations known or used for the advancement of medical and surgical science, and it was with great professional pride that he invited their attention to the exhibits made by the government through the officers of the Army, Navy, and Marine Hospital Service, together with those of our universities, feeling that they would be convinced that we were rapidly progressing in scientific investigations. Medical men had always been expected to give a large part of their services for the relief of the human race without a full recognition of their value, but he believsd that a well established association of military surgeons would command the respect and a position in military organizations which could be attained by no other means. In every State an effort should be made to advance the standard of its medical staff.

Dr. Albert H. Briggs, of Buffalo, in the absence of Dr. Lewis W. Read, of Norristown, Pa., responded for the Association and thanked the local committee for their warm greeting.

The report of the Committee of Arrangements was then made by the Chairman, Dr. Charles Adams, of Chicago. He announced a reception to be given by

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President Senn in the evening, and a theater party on Wednesday evening.

Maj. Nelson H. Henry, of New York, First Vice-President, then took the chair and President Senn delivered his address. He selected for his subject, "Enterorrhaphy; its History, Technique, and Present Status."

The address was listened to with marked attention, and at its close a vote of thanks was extended to President Senn for his exhaustive and highly interesting resume of the subject of the intestinal nature.

An executive meeting was announced for the morning of the second day at the United States Army Hospital at the World's Fair grounds. The Association will then discuss the practicability of changing its name to "The Association of Military Surgeons of the United States," and its scope wi be enlarged to include the medical staff of the Army, Navy and Marine Hospital Corps.

Arrangements will be made for an international congress to be held in this country in 1894. Steps will also be taken to memorialize Congress concerning the establishment by the government of a military medical school.

Two Cases of Tuberculosis Verrucosa Cutis of the Hand.—Dr. Bulkley presented before the New York Dermatological Society:

1. Chas. B., a laborer, native of United States, 23 years old.

The lesions on the dorsum of the left hand have been present about seven years.

Patient's mother had died of phthisis at the age of 60 years. Patient nursed by her during her illness.

The disease began as a "lump" upon the web between the second and third fingers. From this situation the trouble spread steadily to the back of the hand. When the patient came under observation, last May, there was a patch of disease four square inches in extent upon the dorsum of the hand. The diseased area was characterized by general infiltration, tubercles and nodules, all of soft consistency and marked here and there by pustules and small ulcers. There was no cicatricial tissue.

The treatment has been the repeated use of the curette under cocaine and the occasional application of the Paquelin cautery. The wound was invariably dressed with dermatol. The last curetting was done about the middle of January, 1893.

2. B. M., 11 years of age. Eruption appeared between four and five years ago, in shape of small red spot on first knuckle of right hand; was not raised nor painful, nor caused any other subjective symptoms. It disappeared again, but grew slowly larger, and at times became covered with thin red scales; it was never picked nor injured otherwise. The patient did not present any other eruption elsewhere. Father died of typhoid. From five children, the oldest died at 3; would be 17 years old now. The four remaining children are perfectly well; mother living and healthy.

Now there is present an infiltrated area over the first right knuckle, of red color, not sharply defined, shading gradually into healthy skin; the lesion is not painful; slightly raised with slight solution of continuity in severol places of the surface.

Dr. Fow said in regard to the treatment of such cases that Unna's ointment of 20 per cent. solicylic acid and creasote acted admirably after a brief treatment with the curette.

Dr. Klotz said that he doubted the tuberculous nature of many such cases, they more resembled lupus erythematosus or belonged to a class recognized by Leloir, which presented some features of lupus and some of lupus erythematosus. He had at present under observation a boy with a similar eruption of the hand, which some time ago had been presented before another Society as tuberculosis verrucosa cutis. He hoped to bring the case before the Society at a future meeting. The lesions healed under the permanent application of a 10 per cent. salicylic acid plaster without leaving the slightest scar. This he would not consider possible in a case of tuberculosis. He thought that the scars in such cases were entirely the result of the treatment.

Dr. Bulkley stated that he insisted only on the clinical resemblance of these cases to tuberculosis verrucosa; he believed that they could be cured without any deeper destruction of tissue.

Investigation on the Anatomy of the Cervix.—Knupffer (*St. Petersburg. medicin. Wochenschrift*), after a number of experiments on bats, has demonstrated that birth must ensue when the cervix has widened sufficiently for the descending part to make pressure on the nerve ganglia found at the point of the vaginal insertion; pressure on these ganglia producing contraction of the uterus. After a portion of the pregnancy has passed, the uterus rising beyond the upper border of the lateral ligaments, the enlargement of the cervical canal allows the ganglia to be forced nearer and nearer to the wall of the canal. As gestation advances, the lower uterine segment is formed. The mesometric ganglia become more and more conspicuous, and the cervix not only expands upward but presses toward the mesometrium The fundus continuing to rise, a mechanical stimulation of the upper ganglia takes place, causing the first light contractions. With the deeper descent of the fetus, the cervix is stretched and the presenting part approaches the great ganglia, which are prevented by the mesometrium from withdrawing, and the presenting part is allowed to press on the deep ganglia, which are more numerous and larger, and thus strong uterine contractions are set up.

Orificial Surgery.—The next annual class for instruction in orificial surgery will assemble in Chicago on the morning of September 4. It will have a four hours' daily session during the week. For particulars address, Dr. E. H. Pratt, R. 56, Central Music Hall, Chicago.

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NOTES AND ITEMS

Impending Resignation of Professor Henoch.—Professor Henoch, Director of the Clinic of Children's Diseases in the Charite Hospital, Berlin, has intimated his intention of resigning his chair at the end of the current semester. Professor Henoch, whose name is known throughout the medical world as the author of a standard treatise on the diseases of children, is seventy-three years of age, and has held his present appointment for forty-three years. The names of Professor Kohts, of Strassburg; Soltman, of Breslau; and Huebner, of Leipzig, are mentioned in connection with the chair which will be left vacant by Professor Henoch's retirement.

The Value of the Hands and of the Fingers.—Surgeons have often to estimate the chances of saving injured hands, and the comparative values of hands and fingers. According to a scale of value furnished by the Miners' Unions and Miners' Accident Insurance Companies of Germany, the loss of both hands is valued at 100 per cent, or the whole ability to earn a living. Losing the right hand depreciates the value of the individual as a worker 70 to 80 per cent, while the loss of the left hand represents from 60 to 70 per cent of the earnings of both hands. The thumb is reckoned to be worth from 20 to 30 per cent of the earnings. The first finger of the right hand is valued at from 14 to 18 per cent, that of the left hand at from 3 to 13.5 per cent. The middle finger is worth from 10 to 16 per cent. The third finger stands least of all in value; although, like other useless members of the community, it is surrounded by riches, its value is only from 7 to 9 per cent. The little finger is worth from 9 to 12 per cent. The difference in the percentages is occasioned by the difference in the trade, the first finger being, for instance, more valuable to a writer than to a digger.

To Get Rid of the Odor of Iodoform.—Dr. W. Washburn, of New York, (*Med. Rec.*) writes a *propos* of a recent item on the deodorizing of iodoform: In the *Medical Summary* for June, 1893, an article by myself gives an easier and more convenient method. It is there stated that both ether and chloroform are solvents of iodoform, and will remove every trace of it and its odor if the hands are washed with them a trifle after washing with soap and water. The hands have a peculiarly clean feeling after using chloroform, dry instantly, and require no further washing. As nearly every physician carries ether or chloroform in his satchel, and as turpentine would be an additional burden, there is this also in favor of these drugs, they are always at hand. When clothing has been saturated with iodoform the proper thing is to first apply chleroform to the spot and rub it in, then wash with castile soap and water, and finally apply chloroform—or ether will do as well if chloroform is not at hand. Any seams coming within the space to be cleaned will require careful attention just as the nails will if the hands are to be deodorized. The proper way for the nails is to dip a bit of soft wood (a match whittled flat is handy and efficient) in chloroform and with this clean under the nails. I have derived great comfort from applying this method in daily practice."

The Medical Corps of the United States Army.—In the overcrowded condition of the profession, together with the resultant limitation of opportunity in private practice, the recent graduate in medicine will find much to attract him to the Medical Corps of the United States Army (*Med. News*). The standard of requirements is of course elevated, and the appointment is, therefore, the more highly to be prized. Recent innovations, to which allusion has already been made, have, besides, greatly elevated the desirability of the positions in the Corps.

In the organization of the Army Medical School four professors will be selected from among the senior medical officers of the army stationed in or near the city of Washington, and as many associate professors as may be required to give practical laboratory instruction in the methods of sanitary analyses, microscopic technic, clinical microscopy, bacteriology, urine analysis, etc.

The faculty of the Army Medical School will consist of:

1, A President of the Faculty, who shall be responsible for the discipline of the school, and who will deliver a course of lectures upon the duties of medical officers in war and peace (including property responsibility, examination of recruits, certificates of disability, reports, rights, and privileges, customs of service, etc.).

2. A Professor of Military Surgery (including the care and transportation of wounded).

3. A Professor of Military Hygiene (including practical instruction in the examination of air, water, food, and clothing from a sanitary point of view).

4. A Professor of Clinical and Sanitary Microscopy (including bacteriology and urinology).

The position in the Medical Corps is a most honorable one. The pay and emoluments are quite reasonable, while original investigation and study relating to scientific medicine or hygiene will receive due encouragement.

There are at present five vacancies in the Corps, and five more will occur within a year. To save unnecessary expense to candidates, those who desire it may have a preliminary physical examination and a mental examination in the "elementary branches of a common school education" by a medical officer of the army stationed most conveniently for this purpose. This will enable those who would be rejected on account of physical defects, or whose preliminary education is unsatisfactory, to ascertain the fact without going to the expense of visiting a distant city for the examination,

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and will save them the humiliation of being known at home as rejected candidates. It will also diminish the number of rejections by the board. There has been a mistaken idea, due to the large number of rejections, that the examination is unreasonably severe; as a mat ter of fact this is not the case, and the considerable number of rejections has been due to the fact that a large number of applicants have been men whose English education was defective and who have appeared before the board without having made any special preparation for the examination in professional branches.

An Untoward Action of Piperazine.—Dr. Rorig, (*Therapeutische Monatshefte*) in using this remedy upon patients undergoing treatment at the Wildungen Mineral Springs, has noted that it may produce an albuminuria, as determined by the picric acid test, reporting two cases. Piperazine is certainly not an entirely innocent remedy, and should be used with caution by those whose kidneys are unsound.

Honors to the Profession.—In common with the profession generally we are much pleased to find that on the occasion of the marriage of H.R.H. the Duke of York, Her Majesty the Queen has conferred the honor of a baronetcy on Dr. Broadbent, who has attended His Royal Highness and other members of the Royal Household for some years past. The honor of Knighthood has been conferred upon Dr. F. H. Laking, who was associated with Dr. Broadbent in attend ing the Duke of York during a serious illness in June 1881. We sincerely congratulate Drs. Broadbent and Laking on their well-merited honors.

Pregnancy and Sickness.—Morning sickness is so commonly looked upon as an inseparable feature of early pregnancy that one is tempted to suppose that it is invariably present. As showing how unreliable are mere impressions we may refer to the figures brought by Dr. Arthur Giles (*Med. Times and Hosp. Gazette*) before the Obstetrical Society bearing on this point, as ascertained by inquiry from three hundred women confined at the General Lying-in Hospital. In a third of the cases no sickness at all was noticed, while of those who did suffer more or less, seventy per cent experienced it during the first three months. More rarely—about 9 per cent—the sickness occurred during the last three months, but it is possible that the symptom in these ought to be relegated to quite another category. This suggests the reflection that it is necessary to distinguish clearly between the sickness of pregnancy and sickness occurring during pregnancy, the latter being possibly dependent on causes not associated with pregnancy. Seeing that a third of the women do not experience sickness at all, it is evidently undesirable to attach too much importance to its absence in arriving at a diagnosis of pregnancy, or otherwise. Primiparæ of course suffer more severely and more constantly than experienced matrons, but the liability does not go on diminishing regularly until the end of the period of child bearing. The women who suffer most from sickness are those who menstruate more or less abundantly, and especially those in whom menstruation besides being more abundant, is associated with more or less discomfort. Why this should be so the author does not pretend to say. He contents himself with registering the fact. It is open to question whether the sickness of pregnancy can be considered to be physiological, seeing that it is not invariably present, even in the same subject, for a woman who has suffered severely during one pregnancy may escape at subsequent conceptions. We are still as far as ever from an explanation of its occurrence, which is enveloped in the same mystery that shrouds the pathology of sea sickness with which the vomiting of pregnancy has more than one point of resemblance It is certainly conduced to by any source of local irritation, such for instance as the presence in the uterus of an unduly large quantity of amniotic fluid, or a large child, or a placenta of unusual dimensions. It is even alleged that a granular condition of the cervix may be the occasional cause, but as this sickness is essentially irregular in its onset, its incidence and its duration, no conclusions based on therapeutical results can command confidence.

The Old Country Doctor.—The following pen picture is taken from *The Christian Herald*, the journal edited by the Rev. Dr. Talmage. It is not signed with his name, but it bears an exceedingly close resemblance to his writing (*N. Y. Med. Jour.*). Especially worthy of the eloquent divine is his peroration, where he says of the overworked old country doctor: "He deserves every kindness at our hands."

"Our country physicians," says he, "have so many hardships, so many interruptions, so many annoyances, I am glad they have so many encouragements. All doors open to them. They are welcome to mansion and to cot. Little children shout when they see them come down the road, and the aged, recognizing the step, look up and say, 'Doctor, is that you?' They stand between our families and the grave, fighting back the troops of disorder that come up from their encampment by the cold river. No one hears such thanks as the doctor hears. They are eyes to the blind, they are feet to the lame, their path is strewn with the benedictions of those whom they have befriended. One day there was a dreadful foreboding in our house. All hope was gone. The doctor came four times that day. The children put away their toys and all walked on tiptoe, and at the last sound said 'Hush!' How loudly the clock did tick, and how the banister creaked though we tried to keep so still! That night the doctor stayed all night. He concentrated all his skill upon the sufferer. At last the restlessness of the sufferer subsided in a calm, sweet slumber, and the doctor looked up and smiled: 'The crisis is passed.' When propped up with pillows, in the easy chair, she sat, and the south wind tried to blow a rose-leaf into the faded cheek, and the children

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brought flowers—the one a red clover top, the other a violet from the lawn—to the lap of the convalescent, and Bertha stood on a high chair with a brush smoothing her mother's hair, and we were told in a day or two she might ride out, joy came back to our house.

"And as we helped the old country doctor into his gig, we noticed not that the step was broken, or the horse stiff in the knees, and we all realized for the first time in our life what doctors were worth. Encourage them. They deserve every kindness at our hands."

Aluminum is to be used in the construction of artificial limbs, a use to which it seems to be particularly well-adapted, owing to its great strength and lightness.

The English Doctor's Vacation.—Mr. Ernest Hart very amiably and sincerely states in one of his recent papers on matters connected with his recent visit to America that it is idle and foolish for any British doctor who has the leisure and the necessary means to think of spending his autumn elsewhere than in America.

Death from Foot-Ball.—A man, aged twenty seven years, a member of one of the Brooklyn teams that play foot-ball on Sunday, met with a fatal injury in a game played recently. He received a kick in the abdomen, and his death ensued in about forty eight hours. The game played by these teams is said to be different from that played by college graduates.

The Higher Life in America.—The future of the higher life in America, says Mr. Ernest Hart, and the development of culture and mental progress, the struggle against commercialism and the blinding and corrupting worship of the dollar, lies largely with the professional classes. The medical tradition is essentially a protest and an antidote against this curse of new communities.

Anthrax Bacilli in the Mud at the Bottom of a Well.—A very interesting and no less important communication has appeared (*Ann. de l' Inst. Pasteur*), from the pen of Diatroptoff, on the discovery of anthrax bacilli in the bottom of a well. An epizootic of anthrax occurred near Odessa on land where numerous flocks of sheep were pastured. The sheep which perished were buried and the live ones removed from the place. The sheds and pens were thoroughly disinfected and the sheep returned. Again certain of them were attacked with anthrax. A new change and further disinfection was followed by a third outbreak. The proprietor then observed that only the sheep which received water from a certain well (which had been abandoned in domestic use on account of the brackish taste of the water) were affected. The well was filled up and the disease ceased to appear. A bacteriological examination of the water in the well revealed the presence of no anthrax bacilli in either culture or inoculations. The author examined soil from the pen but with negative results. He then examined the mud in the bottom of the well where he found the anthrax bacilli. They were obtained in pure culture by inoculating rabbits and mice with the mud. They died in a short time and from their organs pure cultures were obtained.

The Croton Water.—New York's water supply is not of such poor quality as some good people imagine; still, the measures that the board of health is reported to be about to take for its purification are such as would hardly be taken if the board did not feel that the water was in need of improvement. We have not much faith in those measures, but they will doubtless do no harm beyond using up money to very little purpose. The residents of that part of Westchester County in which the Croton water-shed is situated have observed that, whenever a new dam is completed and a fresh portion of territory is flooded, too little attention is paid to preparing the ground to serve as a place of storage for uncontaminated water, but barn-yards, privy-vaults, and other unsavory belongings of the deserted dwellings are allowed to remain to take their share in forming the bottom. It is to be hoped that in the further prosecution of the reservoir work more care will be taken as to such matters.—*N. Y. Med. Jour.*

Diseases Probably Caused by Flies.—Surgeon General Sir Walter Moore (*Brit. Med. Jour.*) calls attention to the danger of flies conveying disease germs. In a previous article he has brought out this point with reference to Asiatic cholera, but in this article he includes several other diseases such as enteric fever, phthisis, anthrax and leprosy. This is especially important in places where no special care is exercised in the disinfection of excreta or of soiled clothing. Flies seize every opportunity to investigate all kinds of filth. They are constantly alighting upon all sores on faces, hands, etc., whether healthy or affected with contagious diseases. That flies in the East cause "Peenash," or maggots in the nose both of man and animals, is not doubted. The occurrence of isolated cases of cholera and enteric fever and ophthalmia, he thinks may be explained by the conveyance of the germs of these diseases by flies. He suggests the importance of protection against these insects.

Pan-American Medical Congress.—The attention of Delegates and Physicians going to the Pan-American Medical Congress, held in Washington, D. C., September 5th to 8th inclusive, is directed to the Big Four Route, in connection with the Chesapeake & Ohio Ry., as the recognized Official Route for this Convention. An extremely low rate has been made. Sleeping Car reservations may be made in advance, and tickets will be on sale at Big Four Ticket Office, Cor. Broadway & Chestnut Sts., and Union Depot. For full information call on, or address, W. F. Snyder, General Western Agent, St. Louis, Mo.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

Antisepsis and Antiseptics.

I—HSITORY.

BY CHARLES MILTON BUCHANAN, M.D.,

Professor of Chemistry Toxicology and Metallurgy, National University; Member of the District of Columbia Medical Association, of the Washington Medical Society, of the Washington Chemical Society and of the American Chemical Society, etc.

No great discovery, no epoch-making invention is or ever has been the product of one brain. Inklings of the truth have illumined the minds of others than the so-called discoverers or inventors; only in the ripeness and fullness of time is the actual birth of the fact culminated and then by some one who, standing head and shoulders above the common throng, perceives the light and enlightenment of coming ages and proclaims the truth to his fellow man. Newton was not the first to observe that all unsupported bodies fell earthward and not skyward, nor indeed was he the first to suspect the existence of that mutual attraction between all matter of the universe which we term universal gravitation. This had been suspected and supposed by philosophers for ages, but Newton first elucidated and demonstrated the primary laws by which its action was governed—this alone was sufficient to render his "Principia" immortal. Columbus was not the first individual to suspect the existence of a new world, nor indeed to actually discover it; others had gone before him, others had been as brave and daring, others strong in the courage of their own convictions had accomplished as much as he, but the time was not ripe, the world was not ready to profit by their works until the coming of Columbus, who owed so much to the prior discoveries of the brave and hardy Norsemen—for he had undoubtedly made himself familiar with their deeds and discoveries during his voyages to Iceland. It was the good fortune of Columbus to have his discoveries followed up and developed by others than himself. Just so Lister is neither the discoverer nor inventor of antisepsis, though to his work, to his investigations and to his tireless energy the world owes a greater debt of gratitude than to any other single individual. So then, mindful of the fact that Lister was not the discoverer of the agency of microbes in the causation of fermentation, putrefaction, still as the originator and elaborator of the first well defined and systematic method of combating putrefactive fermentation he rendered such service to mankind as to hand his name down to posterity as that of one to whom we owe an incalculable debt of gratitude. It matters not that his methods have been and will probably yet be radically modified, the broad and general principles upon which they are founded remain the same, and indeed will probably endure as long as surgery is a branch of the healing art. Hence, though true antiseptic surgery is much older than Lister himself, this can in nowise detract from the debt which humanity owes to him.

This subject, involving as it does the history of progress in all branches of medical science and intimately associated with the life history of the theories of fermentation as well as the discovery and development of the microscope, is a most voluminous one and must be traced by degrees and stages.

Fermentation and putrefaction are strictly analogous processes or conditions, induced by the presence of minute living organisms, which highly complex organic bodies undergo when subjected to proper conditions of heat, moisture and atmosphere. It has been satisfactorily demonstrated that putrefaction and fermentation only supervene when particles or organisms from without gain access to the putrefying or fermenting mass, whether that be dead or living tissue. This germ theory of putrefaction is the only view at the basis of antiseptic surgery and of which the exhibition of antizymotic drugs, or antiseptics, is only one feature. Then antisepsis consists of such management of a case as to prevent the occurrence of putrefaction in any part concerned. When this has been attained, surgery becomes something entirely different from what it used to be and both injuries and diseases formerly regarded as formidable or hopeless, progress surely and quietly toward recovery. This germ theory declares that the putrefaction of organic substances under so-called atmospheric influence is not effected, as formerly supposed, by the oxygen of the air but by living organisms derived from germs floating in the air or as a constituent of dust, the first step towards the establishment of this theory was the discovery of the yeast plant (Saccharomyces cerevi-

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sisæ) by Cagniard de la Tour in 1836. Then we may understand by the term sepsis the existence of a condition in which infectious or putrefactive germs are present, asepsis, the entire absence of such germs and antisepsis the condition secured by any method whereby the growth and fermentative action of these peculiar and lower forms of organic life are more or less impeded, whether they are totally destroyed or simply rendered innocuous. An antiseptic or antizymotic drug is one which has the power of preventing putrefactive decomposition and whose power is evidenced by the ability to prevent the development of bacteria or micro-organisms in a medium suitable or favorable to their growth.

It then becomes the office of the practitioner of antiseptic surgery to withdraw all obstacles to those operations of Nature which naturally tend to become reparative in effect, since it is nature who heals the wound, while the surgeon prevents any interference with her normal efforts to that effect.

The methods of preventing organic decomposition depend entirely upon the removal of some one or more of the conditions necessary to the accomplishment of the process, no matter by what means effected, for instance, by the extreme elevation or depression of temperature. The preservative effects of cold are well known; animals have been found undecomposed, in the ice of Sibe ria, belonging to extinct species and which must have been embalmed and enveloped in the ice for ages. A boiling temperature coagulates albumen, kills organisms and arrests putrefaction. These two operations are probably the most familiar and common of the processes by which antisepsis may be secured, but are not altogether adapted for surgical use, for reasons which are obvious. With this brief preface we may proceed to the consideration and development of the subject in hand.

The most remarkable characteristic of the present age is its desire to connect itself with preceding ages; to learn how the things, which now are, grew and the origins from which they sprang. In science as elsewhere, one discovery grows out of another and cannot appear without its proper antecedent. In the earliest times of which we have any recorded history, mankind, as now, had recourse to the skill and art of the physician, for indeed, medicine is probably as old as man himself. But naturally the system of medicine then in vogue was somewhat crude and ineffectual as compared with the status of the profession of the present day. Then, and indeed until comparatively recent times, the sole aim and object of the physician seemed to be the use of substances which would *make* a wound heal, *make* flesh grow and *make* it firm, to *make* a good cicatrix and to *make* a good recovery, as though the phy sician himself could exercise creative power. Amid all of these efforts nature was lost sight of, as was also the parts and functions which she must, and she alone can, perform in the healing of any wound. No attention was given to the wound and its natural tendency to heal if uninterfered with; all natural tendencies were looked upon as vicious and as something to be combated. Nevertheless some bright minds, from time to time, realized the undesirability of interference on the part of the physician or surgeon and protested against the methods in vogue in no uncertain tones. This and this alone is the chief virtue of antiseptic principles that the natural operations of recuperation and repair are allowed to progress absolutely free from any extraneous or inhibiting condition.

Putrefaction is but one form of fermentation, hence the history of antisepsis and antiseptic surgery is intimately associated with that of fermentation. We have no positive account of the first brewer but from history we glean the fact that his art must have been practiced and its products appreciated more than two thousand years ago, for Theophrastus lived and brewed nearly four hundred years before the Christian era. The art of making wine, beer and other fermented liquors possesses such an old history, until a very few years ago no one knew the reason, the true secret, of their formation, indeed the little knowledge of the subject then existing was purely the result of empirical observation, the *facts*, the *conditions* of success were known, but not the *reasons*. This is neither astonishing nor unexpected when we consider that the microscope had to be invented and perfected before definite and positive information regarding the phenomena of fermentation and putrefaction could be obtained.

The earliest records of man's efforts to overcome the ravages of time and the effects of decay are to be found in the history of Egypt. Among the Egyptians these efforts took the form chiefly, of embalming the dead, which with them was a religious duty. The process demands a certain amount of knowledge regarding the preservative qualities of the various gums, aromatics and spices. After the decease of a person the first step toward embalming him was the removal of the brain and abdominal viscera; the rudimentary knowledge of anatomy possessed at this time was evidenced by the crude means of removal of these objectionable viscera. After this was accomplished the body was thoroughly washed and cleaned, aromatics and spices being lavishly used; then for seventy days was the body subjected to the action of a solution of salt when it was removed, and after being covered with gum or bitumen, wrapped or swathed in cloths in whlch various gums and spices were liberally enfolded. The body, in a suitable receptacle, was then placed in the tomb to await *unchanged* the summons to the Elysian fields of Aahlu. Here we have, crude as it is, one of the first systematically recorded attempts at the exclusion of what was dimly thought to be the cause of decay, what is modern asepsis but a more elaborate, finished and successful attempt to secure the same results?

We are more or less familiar with the skill displayed by the Chinese in the manufacture of gunpowder and silk, we have read of the wonderful records of astrological science in which the ancient Assyrians sufficiently attest their knowledge hundreds of years before the time of Christ; we stand amazed at the marvelous civili-

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zation of the ancient Egyptians with their comprehensive schemes of irrigation and agriculture and their accomplishments in the arts and manufactures, producing fabrications which to this day are only excelled by nature herself. We are also familiar with those masterpieces of engineering ingenuity, hoary with age, and offering an archetype which none have since followed and the processes of whose construction none have been able to fully explain. These wonderful examples of skill, genius and ability substantiate, beyond peradventure, the fact that these nations had attained an enviable degree of civilization and a high degree of intellectual development. With a proper understanding of the powers, aptitudes and possibilities of the ancient Egyptians before us, it seems more than incongruous that in their history the medical art was not permitted a commensurate enlightenment and erudition or that a degree of perfection was not attained in keeping with their progress in the several phases of their marvelous civilization. The art of embalming presents such remarkable results that we are constrained to place it among the greatest of the achievements of this wonderful people. In medicine and the collateral branches of science the ancient Egyptians showed as great aptitude and as much natural competency as in other matters; but the medical art was shackled by mystic practices and amalgamated to irrational forms of worship by the governing priestly classes. They were ever ready to construe independence of thought and action as a threatened encroachment upon their own arrogated prerogatives or powers; their action and power rendered any attempt at weakening or prejudice of their investitures impossible.

Among the Greeks we find some inklings of the truth as early as the middle of the fifth century before Christ and at that time by Empedocles, who had vague suspicions of the existence of contagia and miasma in the atmosphere. Agrigentum had suffered a pestilential plague for several seasons when Empedocles noticed that it only originated when the sirocco prevailed and this blew from the south-east where it came through a narrow gorge; Empedocles walled up this gorge and Agrigentum suffered no more,

Among the Jews we find, from the book of Leviticus, a primitive appreciation of the nature of some diseases; contagion was dimly understood and also the purifying effects of fire, but no reason for this was known. It is probable that the Hebrews, during the period of their bondage in Egypt, learned many things from their task masters. Moses was educated at the court of Pharaoh and was deeply versed in the so called mystic lore of the period. The Jewish custom of circumcision, at least, must give us some feeling of respect for the methods of prophylaxis then prevailing, no matter how crude.

We discover, however, among the Jews the same tendency displayed by the Egyptians, that is the restriction of medicine to the priestly class, or Levites—they took entire charge of medical affairs and associated them with their priestly functions. Their arrogance in such matters and their intolerance of all advancement which did not come through them is shown by the fact that in Salomon's time a work appeared, said to have been written by the sovereign himself; this work professed to teach how to treat disease by means of natural methods. It was seized and destroyed by the high-priest Ezechias, because he thought that it would damage the interests of the priests and trench upon the prerogatives of the Levite order.

This brings us down to the Christian era.

[TO BE CONTINUED.]

The Treatment of Diphtheria.

BY R. A. PATTERSON, M.D., AURELION SPRINGS, N. C.

Read before the North Carolina State Medical Society, May 11, 1893.

The constant discovery of new remedies and new applications of old ones, and the appalling fatality of some visitations of diphtheria, even in this day of advanced medical knowledge seems to justify the effort to cast upon it every ray of light possible, even at risk of much repetition.

If it be claimed that the pathology diagnosis and etiology of the disease are understood, the great diversity of systems of therapy offered by various advocates show that the best mode of treatment is far from being established, and should this priceless boon ever be granted, it must in turn reflect great additional light on the causes and pathology of diphtheria and thereby act as a proyhylactic. Striving to reach this most desirable point it is to determine the most successful mode of treating diphtheria, the writer would add another to the list of remedies or rather a plan of treatment which has proved most efficacious. This being the object of this paper as little will be said as to the history and general characteristics of the diseases seem compatible with the object announced.

Diphtheria has been described under various name from a remote period, the names being taken mainly from its visible effects. A fibrous deposit on certain mucous membranes characterizes the disease. The membrane may be merely attached to the mucus surface or may infiltrate it and the tissues beneath. Some writers however claim that this difference is the proper distinction between diphtheric and croupous deposit. They contend that when the deposit is superficial and does not infiltrate it is croupous and when there is infiltration it is diphtheritic.

The tonsils and neighboring parts are the region mainly affected in the early stages and as it is estimated that three-fourths of the fatal cases result from the invasion of the air passages, it should obviously be the object of the practitioner to arrest it, ere it extend further. Experience proves that this arrest can be made if treatment is begun early on the plan to be described.

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If not arrested the membrane may spread to the larynx, trachea, bronchi, the nasal cavities, eustachian tubes, middle ear, the eye involving loss of vision, the lips, vulva, or anus and during an epidemic may attack an ulcer existing anywhere on the derma. The first distinction sign, the grayish white patch may be succeeded by slight inflammation. It may become reddish brown and varies greatly in consistence as to toughness, If the deep tissues are involved the removal of the membrane frequently discloses ulceration. If not arrested early the tonsils and adjacent parts become greatly enlarged. In cases of great severity there may be sloughs from the mouth and pharynx. The urine is frequently albuminous, the lymphatic glands often enlarged. The microscope proves that the fibrous membrane contains bacteria, micrococci, pus cells, epithelial cells and red blood corpuscles.

Regurgitation of liquids through the nose on attempting to swallow from swelling or paralysis of the parts on both is an attendance of bad cases. There is often ptyalism, also stiffness of the parts causing difficulty of articulation and sometimes complete aphonia. Hemorrhage from any or most of the outlets of the body may take place. Instead of much heat the surface is sometimes cold. Nausea, vomiting may greatly interfere with proper nourishment. The mind is clear in the majority of cases. Uremia may cause convulsions and coma. These may be complications of general dropsy or pneumonia Sudden death has resulted from failure of the action of the heart. Paralysis of various muscles is a frequent consequence. Anasthesia exists in some cases and in others hyperesthesia. All the organs of special sense may suffer, but as there is no lesion discoverable the effect is generally temporary and may occur in mild as well as in severe cases. Sudden and fatal syncope sometimes comes on in cases not previously considered dangerous.

In the above description although it corresponds with the writers own observation he has adopted, in some of the sentences, the words of Flint.

There is difference of opinion as to the pathology of the disease. One view is that the vegetable germs find lodgment in the throat in the first instance, migrate to other parts of the body, and so the disease becomes general. Another is that it is general from the beginning and that the local manifestations are secondary.

It is generally admitted to be contagious and also to be produced by neglect of sanitary precautions. The contagion seems to be feeble in some instances so as to lead to the denial occasionally of its being communicated in that way. Many striking instances however of its contagiousness or at least of its portability could be cited.

Now it cannot be denied that from the pathology and symptoms, the antidote must be distinctly antiseptic and germicidal also that it must be tonic and alterative. The disease is rapid in its course and the success of any line of treatment depends on an early application of the remedies, for as hinted above its delay allows it to enter the air passages, the chance of recovery is greatly lessened. Adopting this view and adopting this mode of treatment thereto, the phenomenal success attending it verifies its correctness and proves it to be founded on scientific principles and to be devoid of empiricism.

Before detailing the plan of treatment as pursued the outlines of the history of some epidemics which came under the observation of the writer extending back through years will be premised.

In the autumn of 1886 an epidemic of diphtheria presented itself in a locality between Weldon and Gaston in the county of Halifax, whether contagion or neglect of sanitary precautions did not appear. There were many fatal cases, in one instance at least three deaths in one family, and the attending physicians pronounced it to be of a most malignant type. The epidemic extended and entered the bounds of the writers practice. The first case had his most careful attention, The course of treatment was such as had been inculcated by reputable authors. In spite of every devise, it marched steadily on to a fatal termination. Before being called to another case the plan of treatment to be cited occurred to him, and in twenty cases following which concluded the course of the epidemic there was not another death. In the years next succeeding, sporadic cases presented themselves from time to time which yielded very readily to the same treatment. Tn the autumn of 1892 the writer was called to the case of a girl aged perhaps 12 years who had been under the treatment of a practitioner for 5 days and declining steadily till at the time I saw her, it is fair to say she was "in articulo mortis". She died during the succeeding night. This case was followed by three others in the same family, but the early administration of the remedies was so efficacious that it prevented the necessity of confining any one of them to bed. During the next week in a family near by in which there were seven children between the ages of 2 and 18 the disease presented itself. Having been called in to ascertain the nature of the malady, and treat it the mother being a woman of strong sense and a good nurse the writer prepared the medicine and having given the necessary directions, committed the management of the cases to her. She carried them all through safely and without other medical advice. A neighboring physician, a member of this society having adopted the system of treatment proposed, has related to the writer remarkable cases of recovery due to its use and expressed the opinion that it should be universally adopted.

We come now to the indications of its treatment as suggested by its known attributes.

It was stated above that germicides, tonics and alteratives have yielded the best results.

Some years back in a prize essay by Dr. E. S. Gaillard he warmly advocated a combination of muriatic acid tincture muriate of Iron and Potassium chlorate to be taken internally at short intervals. This was a most fortunate conception, for this combination with the addition of water, sets free much of that efficient and ex-

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cellent germicide chlorine and yields to the system the tonic iron so much needed in the asthenic condition of the system appertaining to this affection.

It is a remedy highly approved and will of itself undoubtedly prove curative in many cases, but as is well known it sometimes fails. A combination of Pinus canadensis and phenic acid applied locally has been much extolled. The Pinus as an application to the inflamed and ulcerated surfaces was highly esteemed by the late I. Marion Sims, especially that prepared by Kenedy and the writer has in various instances verified its claims as alterative and curative in such cases. The addition to it of phenic acid brings another powerful antiseptic to the aid of chlorine, and the septic tendency of the disease seems at once to yield to the potency of the two. Now it occurred to the writer that if this constitutional remedy as suggested by Gaillard and the excellent local application of the pinus and phenic acid were used in conjunction, that it would most probably arrest the rapid advance of sepsis if applied early in the attack. The result has after long and thorough test, verified his most sanguine hopes and in these two applications constitutional and local, we have a specific for diphtheria, if there is such a principle as a specific for any disease. So that while the writer claims no credit as the discoverer of the component parts, he does claim to have first suggested the combination.

The details of the treatment are these: As soon as the patient is seen do not delay for the action of a cathartic but begin to combat the poison at once by the administration of two tablespoonsful every hour for adults and proportionally less for children according to age of the following preparation

℞	Potassium Chlorate - - -	ʒj.
	Dilute muriatic acid - -	ʒij.
	Tincture muriate iron - - -	ʒij.
	Water - - - - -	℥ij.

M.

Sig. Diminishing to one or two doses at night with tonic doses of quinine thrice daily. The above compound has a slightly acid taste and is not objected to by children. Immediately after its administration, proceed to map the throat depressing the tongue, with a mixture of

℞	Fluid extract pinus, - - -	ʒj.
	Phenic acid, - - -	gtt. x or xv.

M.

The mopping is repeated after each dose of the solution. The mop is made of a small twig the size of a goose quill eight inches long with a little lint bound to the end, we give this instead of a more artistic implement because so easily obtained. The mopping should be done carefully so as not to wonnd the tender mucus membrane Petroleum applied externally to the throat is advisable.

Under this treatment improvement begins at once, the fibrous matter ceases to accumulate. That which has already appeared turns black, being stained by the red Pinus contracts around the edges and in a few days drops off and the amelioration of all the systemic symptoms becomes obvious.

Unlike the plan of treatment proposed at your last meeting by Dr. Martindale of N. Y. this course of treatment does not require an air tight room so unattainable in very many localities, nor an oil store quite as much so, but may be applied easily and speedily anywhere.

Albuminuria as a Result of the Act of Parturition.—Modern obstetrics has done much to clear up the pathology of the gravid, parturient, and puerperal conditions (*Medical News*). Perhaps the greatest amount of discussion has centered about the condition that for want of a better name is called eclampsia. A knowledge of the etiology of this condition would practically mean also a recognition of the means of its prevention and treatment. Many clinicians admit that there may be a physiologic albuminuria, as, for instance, after the taking of albuminous food and after active physical exercise. Recent observations by Aufrecht and Friedeberg (*Centblt. f. klin. Med.*) demonstrate that transient albuminuria may occur in women as a result of the act of parturition. The observations were made upon healthy puerpera, free from gonorrheal infection, and were conducted as follows: The urine was examined in the usual manner before the onset of labor. In case the woman was in labor at the time of entrance into the hospital and was unable to spontaneously evacuate the bladder, the urine was withdrawn by means of the catheter, the most scrupulous aseptic precautions being observed. The urine was withdrawn by catheter at the conclusion of labor and again examined. In cases in which the urine presented any abnormality the examination was repeated twenty-four hours after the conclusion of labor. Thirty-two puerperal women were examined in the manner outlined. In none did the urine contain albumin before the occurrence of labor. In eighteen, however, albumin was found after labor in varying proportion; in none were tube casts found, and in but one a small number of red-blood corpuscles. It thus seems reasonable to infer that the albuminuria is a result of the activity of labor, perhaps through venous stasis from the pressure upon the abdominal viscera and forced expiration with closed glottis. The practical lesson to be learned is that the urine should be faithfully and repeatedly examined immediately bofore labor, and, if albumin be present, that untoward symptoms should be carefully looked for, on the appearance of which the labor should be terminated as quickly as possible. This injunction applies with special emphasis if eclampsia (which is almost invariably associated with albuminuria) has appeared. If artificial labor is not practicable chloral hydrate is perhaps the next most useful agent.

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EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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Aktinomycosis and Meat Inspection.

Since the discovery of the aktinomyces fungus in man by Israel quite a number of cases of aktinomycosis, occurring in nearly all the organs of the body, have been reported. The fungus may enter the body with the food or by inhalation. Outside of the animal organism the fungus has never been discovered, but, judging from cases where in the pus of aktinomycosis foci spikes of cereals and particles of wood were found, it is highly probable that it grows upon vegetable materials. This also explains the frequent occurrence of this affection in the neighborhood of the mouth, principally the jaws, of cattle. Actinomycoses of the lungs may, the same as syphilis, be easily mistaken for tuberculosis. Primary foci, in consequence of an infection by eating food containing the fungus, may occur along the whole alimentary tract while the air passages are infected by inhalation.

Metastases are not very frequent; they occur by the entrance of the fungus into the circulation in consequence of arrosion of a bloodvessel by the ulcerative process. Metastases in the liver are principally derived from the organs which furnish the portal blood, while metastatic foci in the skin, muscles, bones, brain, bowels and kidneys, are usually due to a primary focus in the lungs.

An otitis media interna aktinomykotica has been reported by Domenico Majocchi in *La Riforma Medica*. The patient, forty-eight years of age, had also actinomycosis of the lungs, and it is very probable that in coughing some of the expectorated matter entered the eustachian tube and along this tube into the tympanic cavity and the petrous portion of the temporal bone; later the meninges and brain became involved and the patient succumbed.

Judging from cases of abscesses, in which aktinomycosis was accidentally discovered, it is very probable that ulcerative processes due to this affection are often not diagnosed as such, and in all cases, where the cause of the suppuration is obscure, a microscopic examination of the pus for aktinomyces should not be omitted.

In cattle the affection occurs most frequently in the lower jaw, but it occurs also in the upper jaw, tongue, fauces, larynx, œsophegus, stomach, bowel, skin, lungs and in the subcutaneous and intermuscular connective tissue.

It is to be hoped that in not too distant a future American cities will have a thorough and scientific meat-inspection, for the inspection as it is now carried on is entirely insufficient. At present the cattle are only inspected before slaughtering, while it is evident that soon after slaughtering all the organs should be thoroughly examined before they are removed by men especially trained for that purpose. To accomplish this a city should have only one or two large slaughter houses in which all the cattle are slaughtered. In this way a large percentage of tuberculosis and aktinomykosis as well as other diseases would probably be prevented.

Editors of medical journals can do much in arousing the interest of the profession in this matter, and we hope that some of our contemporaries will give their attention to a reform in meat inspection, for so far this important chapter in hygiene does not seem to have received the attention in this country which it justly deserves.

The Cholera at New York Quarantine.

The admirable system, writes the *New York Medical Journal*, authorized by the recent quarantine law, of stationing sanitary inspectors of this Government at foreign ports has demonstrated its advantages during the present summer. Reference has been made to the fact that Surgeon Fairfax Irwin telegraphed from Marseilles on May 27 that cholera existed in that city, although the authorities then and for some time subsequently denied the fact. On July 19 Assistant Surgeon G. B. Young telegraphed from Naples that there had been four cases of cholera in that city on the 17th of that month. The report was at once denied by the Italian authorities. The information, however, served a good purpose, for on August 4 the steamship Karamania, that had cleared from Naples on July 15 having 471 passengers, arrived at New York quarantine station with a history of the death of one passenger from congestion of the lungs, on the second day out, and the death of two passengers, on August 2 and 3 respectively, of diarrhea and vomiting.

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Although the ship had sailed two days previous to the known occurrence of cholera in Naples, Health Officer Jenkins decided to detain her at lower quarantine for observation. The wisdom of his action was shown by the removal of a passenger suffering from cholera, as demonstrated by bacteriological examination at the Swinburne Island hospital on August 5. On August 8 another cholera patient was taken from the observation barracks on Hoffman Island, and he died on the evening of the 9th. On the latter evening two more patients were transferred; on the 10th five patients; on the 11th, eight patients; on the 12th, one patient, and on the 13th, two patients. There was a total of twenty cholera patients, and three of these died. The passengers under observation were discharged on August 22, nine days after the last cholera case occurred.

Health Officer Jenkins is to be congratulated upon the promptness and efficiency with which he handled this vessel and its passengers, and the public press is to be commended for the manner in which it avoided alarming head-lines calculated to intimidate many people and produce a senseless stampede such as was witnessed last year.

The Disorders of the Nervous System Associated with the Change of Life.

Gustavus Eliot, A.M., M.D., of New Haven, Conn., has published a very instructive paper upon this interesting topic in the *American Journal of the Medical Sciences*, September, 1893, and we take the liberty of reproducing the same in its full text, as follows:

During the fifth decade of a woman's life she is subject to a group of peculiar symptoms. The cessation of the function of reproduction is an event second in importance to the death of the individual. It is not strange that the loss of this wonderful power should be accompanied by changes in the mental and emotional condition, and that the action of the entire nervous system, connected as it is with every organ of the body, should be profoundly disturbed. The women in whom the change of life occurs unaccompanied by disagreeable sensations and symptoms are in the minority. The object of this paper is to enumerate some of these symptoms, to discuss briefly their nature and origin, and to present some suggestions with reference to their prevention, amelioration and cure.

In ancient times it was commonly believed that menstruation was, at least in part, an excretory function; that with the menstrual blood some indefinite and unknown excrementitious substances were eliminated from the body; that retention of these waste products occurred when the function of menstruation was inadequately performed; and that such retention was productive of very serions results. This idea has been gradually abandoned by most men who use their intellects and are not abnormally credulous. It is now generally recoguized that the absence of menstruation is often not only attended by no unfavorable results, but, on the contrary, is an important aid to the prevention and increase of the vital forces.

It might perhaps be not unnatural to suppose that, when menstruation finally ceases at the menopause, the failure of the periodical sanguineous flow to occur would result in the presence in the vascular system of an abnormal amount of blood, and that this would give rise to important disturbances of various organs. It will subsequently be shown that this is, at least, improbable, and that on the other hand a deficiency in blood, or of certain of its more important constituents, is frequently present at this period.

It may be premised that the average woman is exceedingly neglectful of her health. Her clothing is often insufficient, and so arranged as to produce positive injury to her body. Her food is unsuitable in character, improperly prepared, taken at irregular intervals and in insufficient quantity, and not properly digested. Tea and coffee are frequently used to excess. Work, both productive and unproductive, is carried on with little regard to the limits of her strength or the necessity for rest. The excretory functions are, as far as possible, forgotten, and constipation becomes habitual.

Such disregard of the recognized laws of health, persisted in for forty years, predisposes to the occurrence of serious disorders. It is at the menopause that many women begin to pay the penalty for their long-continued negligence.

Furthermore, the period of life between the fortieth and fiftieth years is likely to be especially trying to the emotional faculties, The loss of aged parents, of sisters or brothers in the prime of life, of children just arriving at maturity, or of trusted and life-long friends —one or more of these bereavements is likely to befall one at this time. Frequently a succession of these sad events produces an almost overwhelming depression of spirits. Besides these great and more obvious trials, the ordinary cares, troubles, and worries of life, weigh one down at this age with more than ordinary irresistability, because then one begins to feel that the years of greatest activity and vigor have passed, that old age is approaching, and that if the expectations of youth have not already been in some measure fulfilled, they will not be likely to be realized in the future. These depressing events and conditions act as exciting causes of many disorders to which the woman has predisposed herself by years of careless living.

After she has been suffering for weeks, and perhaps for months or years, she is very likely to wander into a physician's office and tell him that she has malaria. There are, it is humiliating to confess, a good many doctors who will tell her gravely: "Yes; you have malaria. You must take plenty of quinine"

If you inquire carefully in regard to the clinical history of one of these patients, you will find that she suffers from more or less of the following symptoms: Indisposition for exertion, inability to work, forgetfulness, headache, dizziness, insomnia, flushes of heat fol-

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lowed by chilly sensations, sweating, palpitation, flatulence, abdominal distension, and constipation. On making further examination you will probably find hat her heart and lungs show no evidence of any organic lesion, and that her flesh is flabby, her pulse soft, her tongue coated, and the conjunctivæ are pale. She may have considerable intercostal neuralgia and frequent backaches, and tender spots may be detected in her head, back and chest. She also sometimes complains of swelling of the face, hands and feet, which, however, is often not a real œdema.

A study of the clinical history of these cases, and a consideration of the inconstant and changeable character of the symptoms, is sufficient to convince one that they are not of organic origin; that they are not associated with any distinct pathological change in the nervous system, but that, on the other hand, they may occur in connection with a variety of different conditions.

In some cases a disordered digestion is the most important factor in the causation and perpetuation of these very distressing symptoms. The chief disturbance may be in the stomach. The eructations of gas and flatulent distension of the stomach are frequently the most annoying and most important symptoms. Or, on the other hand, the intestines and the associated glands may be chiefly at fault, and the most marked symptoms an obstinate constipation and flatulent distension of the abdomen. Not infrequently these two conditions are found coexisting in the same case. They may then give rise to, or be associated with, a number of other symptoms, the most common of which are headache, dizziness, palpitation and dysponea.

In some cases anemia is an important element. This may be associated with disturbances of digestion,either as cause or effect. If both exist either may intensify and aggravate the other. If anemia is present the patient usually complains of headache, dizziness, and dyspnoea.

In other cases insomnia is a prominent feature. This also may be a result of pre-existing derangements of function of various organs, and in turn, when present, may aggravate other disorders.

Finally, in many cases there is a distinct and well-marked element of nervous exhaustion. This is frequently the starting-point of other disorders, and when they are fairly established is intensified by them.

In making the diagnosis of this condition one should be very careful to exclude the possibility of the existence of any organic disease. In many cases organic diseases are accompanied by symptoms which resemble those which have been described as of frequent occurrence in connection with those functional disordeis of the nervous system which are the subject of this paper.

Careful exploration must be made of the chest—of the lungs, but more particularly of the heart to which many patients think that their troubles are referable—in order to detect the possible presence of commencing or latent organic disease. Careful analysis of the urine should be made occasionally, in order that no organic change in the kidneys may escape notice. The temperature should be taken now and then, especially if the action of the heart is at all accelerated, so that no febrile disturbance may be overlooked. Naturally inquiry should be made as to the manner in which each organ of the body is performing its function, and any deviation from the normal must be carefully noted and duly considered in deciding upan a plan of treatment.

The prognosis of these disorders is rather uncertain on account of the variety of circumstances which influence their progress. Many patients are exceedingly dilatory in seeking medical advice for these troubles. Many are very negligent about following up the treatment which is prescribed, and some fail to receive proper treatment because their physicians make an erroneous diagnosis, or do not understand what therapeutic measures are adapted to the case.

The natural tendency of these disorders is to persist for months and years. They do not, however, have any inherent tendency to terminate in death. With proper treatment their severity may be mitigated and their duration very much abbreviated. If the patient seeks advice early, is judiciously managed, and follows up the treatment conscientiously and persistently, the prognosis is good. Care must be exercised to remove, as far as possible, the conditions which permitted the development of the symptoms in the first place, lest they return again after treatment has been discontinued.

In the management of these cases it is necessary to combine very careful hygienic regimen with appropriate medicinal treatment. Worry and care must be avoided as far as possible. Regular and prolonged rest must be secured. A moderate amount of mental occupation during waking hours is useful. Abundance of fresh air and moderate exercise are essential. Food which can be easily digested, and which has been properly prepared, must be taken regularly and in sufficient quantity. It must be eaten and chewed thoroughly, and time must be allowed for the process of digestion to become fairly established before the resumption of mental or physical exertion. Tea and coffee must be entirely abandoned, and abundance of milk and water must be taken. Bathing and rubbing influence very favorably the circulation and the process of nutrition. The body must be properly protected, so as to maintain an equable degree of warmth throughout, care being taken to avoid the extremes of an excess or a deficiency of clothing.

If the functions of any organ are not properly performed, the treatment must be so directed as to restore and maintain the normal action.

The digestive organs are perhaps more frequently deranged than any others, and require most careful attention to secure a proper performance of their functions. Constipation, flatulence and anorexia are the most common and the most important indications for treatment. If constipation exists alone, a pill of aloes and myrrh taken at night, and followed, if necessary, by another in the morning, will generally produce a

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pleasant effect. Another excellent pill under these circumstances is one containing one fifth grain of aloin and one-sixtieth grain of sulphate of strohnine. Two or three of these may be taken at different times through the day, if one at night is not sufficient. The object to be aimed at is to secure one easy movement of the bowels each day, unaccompanied by nausea or griping, by means of small doses, repeated, if necessary, of some not very irritating laxative.

If anorexia, constipation and flatulence are all present, a bitter mixture will generally prove useful—a combination of nux vomica, cascara sagrada, cardamom and gentian, with aromatics, is exceedingly valuable under these circumstances.

If anemia is well marked, iron and arsenic are very useful. If there is no, or only slight, disturbance of the digestion, pills containing sulphate of iron with carbonate of potash, known as Blaud's pills, with the addition of arsenious acid, produce excellent results.

If constipation accompanies anemia, a pill or capsule containing arsenious acid, aloes, nux vomica, and reduced iron may be advantageously prescribed.

If neuralgia is a prominent symptom, five-drop doses of fluid extract of gelsemium will give relief in many cases. In connection with gelsemium, or in place of it, benefit will often be obtained from the use of sulphate of quinine with extract of hyoscyamus.

If the nervous symptoms are not accompanied by derangement of the functions of other organs, or if they persist after proper attention has been paid to the regulation of these disorders, it is necessary to prescribe remedies which act more directly upon the nervous system. The most useful drugs of this class are bromide of sodium, phosphorus and its compounds, nux vomica, and arsenic.

The use of arsenic has been already mentioned in connection with the management of cases in which anemia is an important factor. In the treatment of certain forms of anemia it is of great value. But besides increasing the production of red blood-cells, it unquestionably possesses the power, also, of promoting the nutrition and vigor of the nervous system. In combination with iron and nux vomica it is exceedingly useful.

The utility of phosphorus as a nerve tonic has long been recognized. A combination in pill form of one one hundredth grain of phosphorus with one quarter grain of extract of nux vomica has been used extensively and with excellent effect. One great drawback to its use is the difficulty of securing pills which have been properly made and in which the original characteristics of the drugs have been retained.

Phosphide of zinc is frequently substituted for phosphorus. One-tenth grain of this compound with one-fourth grain of extract of nux vomica will often prove of benefit.

The compound syrup of the hypophosphites is another preparation which is very popular with the profession, and which has positive value as a nerve tonic.

As a palliative agent, to produce sleep, to equalize the circulation, and to relieve the condition of nervous irritability commonly called nervousness, no drug is more useful than bromide of sodium. This salt is preferable to the other bromides because it is less unpleasant to take, and is less irritating to the stomach while at the same time it is not inferior in therapeutic value. In prescribing this very valuable drug, one should never forget that it does not increase the strength or nutrition of the nervous system. It should not, therefore, be relied upon for continuous prolonged administration to the exclusion of other remedies. On the contrary, its use should be supplemented by the administration of general tonics and of special nerve tonics. Iron and arsenic are especially well adapted for this purpose.

In conclusion the following propositions are presented:

1. At the time of life when the menopause occurs the various organs of a woman's body are likely to be in a state of depression as regards either their nutrition or functional activity, so that the normal equilibrium of health action may be easily disturbed, and abnormal action, the manifestation of disordered function, may be inaugurated and perpetuated.

2. The cessation of menstruation is an event of great physiological importance, and is perfectly competent to produce grave disturbances of the nervous system, if any predisposition to them already exists.

3. The more common disorders of the nervous system occurring under these circumstances are functional in character, and are associated with disturbances of functions of other organs, and especially of the digestive circulatory, and hematopoetic systems.

4. In their treatment, attention should first be paid to improving the general nutrition of all the tissues of the body, and restoring each organ to its normal activity.

5. If, after all the other organs have resumed the proper performance of their functions, symptoms referable to a disordered condition of the nervous system still persist, recourse must be had to remedies which act directly upon the nervous system, either by improving its nutrition or by modifying and regulating its action.

Tracts for the Prevention of Tuberculosis for Gratuitous Distribution are now offered by the Pennsylvania Society for the Prevention of Tuberculosis (E Leslie Gilliams, 727 Walnut Street, Secretary), Philadelphia. These tracts are written in common technical language, so that the laity can understand them, and physicians should make themselves local distributing agents for scattering among the community the knowledge of the simple and highly important means of preventing the spread of the "king of diseases." Membership in the Society costs only one dollar.

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ABSTRACTS

The Treatment of Fractures of the Nose.—Walker Downie (*Glasgow Medical Journal*), contributes an interesting article on fractures of the nose.

Although these injuries follow a variety of causes, the violence is always of a direct character. The nasal bones, from their prominent position, suffer most frequently from injuries of this region. The cartilaginous septum, in the author's experience, is seldom fractured, but is frequently dislocated. More rarely the lachrymal bone, the nasal process of the superior maxilla, the vomer, and the central plate of the ethmoid, may be involved. In all cases of fracture there is more or less laceration of the overlying mucous membrane, accompanied with more or less hemorrhage.

The amount of deformity will depend on the amount of swelling and echymosis which follows the injury. The septum may be considerably dislocated laterally without appreciably altering the contour of the nose.

When this structure is fractured, however, or dislocated backward, a characteristic depression will be seen immediately beyond the extremities of the nasal bones. The nasal bones themselves, when broken, may be displaced backward or to either side. If the lachrymal bones are implicated, emphysema of the eyelids and cellular tissue of the orbit is apt to follow.

The treatment of these cases should consist in arresting the hemorrhage, restoring the parts to their normal condition, and the application of proper means of retention. The bleeding is best controlled by plugging the nares, and as the posterior nares are never involved they need not be packed. After a single fracture the displacement does not tend to recur as the parts have been restored, but in the cases in which there has been comminution some means of retention after reduction is necessary. The method so often recommended, of plugging the nose after introducing a catheter, followed by the application of pads of lint applied to the nose externally and retained by adhesive plaster, is condemned, on account of being both unsurgical and disappointing in results.

The author prefers to use the leaden mask, in conjunction with intra-nasal splints made of the same material. After reduction the intra-nasal splint is applied. This somewhat resembles an almond in shape, and is furnished with a wing on either side at the broadest part. The flat portion lies in contact with the septal cartilage, and the curved wings lie against the inferior turbinated body.

The external splint is then fitted; it consists of a single piece of sheet lead, the nose-piece of which is prolonged over the alæ and on to the cheeks to give support; the upper part is continued on to the forehead. The whole is covered with a layer of silk or linen fabric fixed to its surface by means of paste. In dealing with old fractures the parts involved must be very thoroughly broken up, after which they can be moulded at will.

The intra-nasal splints may be removed at the end of four days, and the external splint in six days. Either, or both, may be reapplied if necessary. For controlling the moderate hemorrhage, a 5 per cent solution of antipyrine is recommended.

Entero-Anastomosis as a Substitute for Circular Suture.—Braun describes (in the *Archiv f. klin. Chirurgie*), his method of performing intestinal anastomosis. After resection of the bowel the two ends are inverted and a double row of sutures applied. The coils to be united are laid side by side, the closed ends pointing in opposite directions. This, the author considers a distinct advantage over Senn's method, the peristaltic movements have a tendency to force the contents of the bowel against the sutured end. The slight torsion of the mesentery, which unavoidably occurs in Braun's operation, does not exert any unfavorable influence. After the ends of the bowel have been placed in their proper positions they are united by superficial sutures, which include the serous and part of the muscular coat, the length corresponding to the length of the intended opening—5 to 9 centimetres. Care must be taken not to penetrate the lumen. The blind ends, which should be short, are secured to the adjacent intestine in order to prevent invagination. The next step is to make a cut 4 to 8 centimetres long through the serous and muscular coats down to the submucous coat. The cut is easily made, and permits of the passing of the silk sutures in the posterior margins of the incision with ease and safety. The mucous membrane is next incised, and the redundant edges are removed; the posterior margins and then the anterior margins, are united with a continuous catgut suture. Finally, the anterior margins of the serous and muscular coats are united with a row of silk sutures, and a few stitches are passed at the extremities of the two rows of sutures.

The time required for the establishment of the actual fistula was from fifteen to twenty-five minutes, and the number of silk sutures employed varied from thirty-four to fifty-four. The author reports ten cases operated on by this method, with five recoveries and five deaths.

The Extirpation of Brain Tumors.—V. Bramann contributes a very interesting article on this subject in the *Archiv f. klinische Chirurgie.* Two cases are reported. The first patient was a peasant, aged 46 years. A year and a half previously to applying at the hospital he had received a blow on the head. He complained of headache; the left side of the face and left arm were paralyzed, and there was marked weakness of the muscles of the left leg. The reflexes of the affected side were exaggerated, and ankle clonus was present. Hearing and vision were impaired on the affected side. At this time the fundus of the eye appeared normal, although later choked disk of a light degree developed.

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The patient had frequent attacks of clonic spasms, beginning in the flexors of the left hand and ascending until the arm, shoulder, and left side of the face were involved. Consciousness was preserved during these attacks. During the spasm there was conjugate deviation of the eyes to the left.

The localized paralysis and spasms were thought to be due to a tumor of the brain, which was probably a large one, involving the posterior (movement of fingers) as well as the anterior central convolutions.

The convulsions gradually became more frequent, the pains in the head increased. On one occasion the patient had a syncopal attack, with nausea, vomiting, and slowing of the pulse. Operation was finally decided upon and performed after Wagner's method of temporary osteoplastic resection. The soft parts having been turned up as a tongue-shaped flap, the bone was chisseled through in the line of the incision in the soft parts, and its base broken by means of raspatories pushed along under the surface, and the flap laid back. After removal of the thickened dura, a cystic, fluctuating mass, feebly pulsating, was discovered. It was apparently distinct from the adjacent brain-substance, nevertheless a portion of the cerebral matter was removed as well as the growth. A drainage-tube was wrapped in iodoform gauze and inserted into the cavity, and an antiseptic dressing applied.

Although the wound healed satisfactorily, the patient was not benefitted by the operation, and within two weeks convulsions similar to those before described returned. The drainage-track became surrounded by unhealthy granulations, and the part became prominent The tumor was found to be a myxosarcoma, and the return of the convulsions was ascribed to a recurrence of the growth. A second operation was no more successful than the first. Finally, a third attempt was made to relieve the patient; this time a considerable portion of brain substance surrounding the growth was removed. The cavity was four to six centimetres deep and as large round as a saucer. The result was eminently satisfactory. Two months after the last operation the patient was able to leave the bed, the choked disk had disappeared, power had returned in the paralyzed leg, the hand and forearm alone having failed to improve. A month later there were no signs of return of the disease. Sarcomata of the brain seem less prone to give metastasis then when these tumors are found in other portions of the body.

A second case was that of an artist who had received a blow on the right side of the head a year before coming to the hospital. At this time he had choked disks, most marked on the right side; diminution of the field of vision, particularly of the right; left sided facial paralysis; paresis of left arm, and to a less extent of left leg; also slight loss of power in the right leg. The reflexes were increased on both sides, but were most marked on the left. After being under observation for a week an edematous swelling appeared on the right side of the head. A few days later the patient had a convulsion affecting the left side of the face and the left arm and leg. The diagnosis lay between abscess and tumor. The choked disks, the absence of symptoms of meningeal irritation, of vomiting, of hebetude, of fever and of anorexia, favored the latter condition.

An operation was performed, when a neoplasm of the brain was removed which weighed two hundred and eighty grammes. A large part of the longitudinal fissure, and even the cribriform plate of the ethmoid bone, were exposed after removal of the tumor. In order to equalize the intra-cranial pressure and prevent edema of the brain, the cavity was firmly packed with sterilized iodoform gauze. Convalescence was tedious, but recovery finally took place. The choked disks disappeared, but the power in the limbs was only partially regained. The tumor proved to be a mixed spindle- and round-celled sarcoma.

The author devotes considerable space to a discussion of papillitis. This condition is almost invariably present in cerebellar tumors. Neoplasms in the frontal, parietal and temporal regions cause a milder grade of the same condition. These variations are explained on anatomical grounds. The venous blood of the fundus is carried by the posterior and short ciliary veins directly into the cavernous sinus, or into the superior ophthalmic veins. The latter empty principally into the caver, nous sinus; a portion of the blood, however, is delivered into the anterior facial vein. Any interference with the return circulation, either by pressure upon the vein accompanying the optic nerve or on the sinus itself will give rise to a venous hyperemia of the disk.

The sinus is so well protected in its membranous envelope that a great increase in the intra-cranial pressure, or a force acting almost perpendicularly from above downward, as a tumor of the base, is necessary to cause sufficient pressure to give rise to symptoms. An increase of pressure is noted much earlier,however, by the veins accompanying the optic nerve, which lack the complete protection of the dura, and, moreover, rest directly on the base of the skull. Hence, the choked disk in tumors of the cerebrum, especially in those situated near the convexity, is due primarily to compression of these veins; secondarily, to compression of the sinus. The stasis produced by even a remote tumor is naturally more intense the nearer the base of the brain the new growth is situated, and reaches its highest degree when a direct compression of the veins at their point of entrance into the sinus exists. Tumors in the median line or very large growths, produce bilateral choked disk. In such cases the localization of the growth is very difficult, as the same condition is produced by cerebellar tumors. According to the author, an important point in the differential diagnosis is the presence of hemorrhage and ecchymoses in the retina and choroid. These are only met with in tumors near the base of the frontal lobe, and are never seen in cerebellar growths, no matter how advanced.

The author also offers an explanation of the choked disk occurring in tumors of the cerebellum, and in other

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affections of the posterior fossa of the skull. The blood from the orbit and bulb flows into the cavernous sinus. thence into the superior and inferior petrosal sinuses. The first, running along a groove in the petrous portion of the temporal bone, empties into the lateral sinus at a point where the latter emerges from the tentorium. The second flows backward towards the jugular foramen; a third, but inconstant channel, the basilar plexus of Virchow, carries the blood to the anterior spinal plexus. The inferior petrosal and the basilar plexuses lie in shallow bony grooves, and hence are easily compressible. The lateral sinus in that part of its extent occupying the sigmoid fossa of the temporal bone, is less resistant than the portion in the tentorium, which membrane separates more or less completely the posterior from the middle and anterior fossæ of the skull. A tumor or an abscess developing beneath the tentorium, even if small, will produce a more marked increase of pressure than similar affections of the hemisphere. This rise ef pressure extends to the brain and its membrane, to the lateral sinus, as well as the other two feebly protected channels. The first result is a stasis in the cavernous sinus, which soon leads to stagnation in the fundus. Tumors of the occipital lobes, by downward pressure on the tentorium, also produce choked disk—as in nearly all cases of tumors of the hemispheres, more marked on one side. Affections of the temporal lobes are very variable in respect to the production of choked disk, and it has been generally supposed that this condition is very rare. Excluding the more common disease of this region—namely, abscess following middle-ear disease—we will find that choked disk is by no means rare, but it is not as marked as would be expected from the proximity to the cavernous sinus. The explanation of this condition is found in the fact that the cavernous sinus is exceedingly well protected against lateral pressure, both by the enclosing dura and more efficiently by the processes of the tentorium attached to the anterior and posterior clinoidal prominences. The more anterior a tumor of the temporal region is situated, the more marked will be the difference in the stasis in the two eyes. If the tumor is located at the base of the third frontal convolution, compressing the optic tract and its vessels, then we shall have choked disk of the corresponding eye only. It is a fact that the degree of the choked disk does not depend so much upon the size of the tumor as upon its structure and mode of growth. Circumscribed tumors produce more marked symptoms than abscesses and diffused growths, which form at the expense of the brain mass.

In regard to the technique of cerebral surgery the author dwells upon the importance of checking all hemorrhage. Compression with sterile gauze during the operation, and with an iodoform tampon afterward, is of the utmost importance in preventing edema. Large cavities should not be packed with iodoform gauze exclusively, as there is danger of intoxication. Opening of the skull simply to relieve pressure is condemned by the author.

Syphilitic Spinal Paralysis.—Erb (*Neurolog. Centralb.*) maintains that the spinal manifestations in subjects of syphilis, possess sufficiently marked features to make a special morbid entity, though having much resemblance to the spastic paralysis so far as the various movements of the legs are concerned, and the exaggeration of the tendon reflexes. Muscular spasms are, however, relatively little marked while bladder function is almost always affected.

The symptoms are of slow development and progress and even years may pass before they are all present. They consist in paraesthesia, transient pains, fatigue easily brought on, stiffness and weakness of the legs, and paralysis of the bladder; the latter existing as a sole symptom, perhaps for months or even years. Spasmodic paralysis of the legs may follow, but rarely complete paraplegia. The patient moves about slowly, the legs are stiff and progression is painful as though there were a combinatson of intense muscular spasm along with the paresis. Sexual power is diminished in most cases. There is a decided tendency to improve, especially under energetic treatment. The author maintains that in bearing this syndrome in mind he has been enabled to diagnosticate the condition before enquiring into the existence of previous syphilis, and the distinction is readily made from the other spinal affections, tabes, sclerosis en plaques, compression myelitis and syringomyelia. From spasmodic tabes, it is recognized by the existence of troubles of sensation, and deranged bladder formation, by the slight intensity of the muscular spasm and by the difference in evolution.

It has often been confounded with transverse dorsal myelitis, but in syphilis paraplegia is only exceptionally complete and that usually only for a short time.

In thirteen out of the twenty-two cases observed, the condition appeared within three years from infection. The lesions apparently occupy the dorsal segment and only involve a portion of the thickness of the cord; the posterior half of the lateral columns, the posterior columns, the posterior part of the gray substance.

Attention is called to the following debetable points:

1. Do a sufficient number of cases of dorsal myelitis of specific origin exist to make a special form of myelitis? The author believes that from thirty-five to forty per cent of chronic cases are of syphilitic origin.

2. Has this form clinical characteristics of its own?

3. Among the many forms of syphilitic affections of the spinal marrow is this one sufficiently represented to separate it from the complex cases where several forms are associated in the same subject? And finally does the symptom-complex always correspond to an anatomical lesion.

From the large number of cases observed by the author he feels justified in creating a form of spinal paralysis purely syphilitic, but further study of the question seems called for.

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MEDICAL SOCIETIES

American Neurological Association.—The nineteenth annual meeting of this association was held at Long Branch, N. J., July 25, 26, and 27, 1863. We are indebted to the *Medical News* for this report:

The President's Address was delivered by Dr. Henry M. Lyman, of Chicago. He called attention to the predisposing causes of diseases of the nervous system, and said that the simple recognition of disease is not sufficient; etiologic classification is also necessary. He then dwelt upon the subject of rheumatism affecting the nervous system, the marked forms of which, chiefly affecting sensation, are not so commonly recognized and are frequently ascribed to other causes. They are usually observed in elderly persons of nervous temperament and arthritic diathesis, and differ from many other similar disorders of sensation in being transient, migratory, and of brief duration. Among these ailments is a prickling of the surface of the skin, often universal, but sometimes limited to certain points, where the patien experiences a sudden sharp prick, like a fleabite. Another disorder of cutaneous sensation often affects the scalp, and is occasioned by irritation of the superficial nerves of that region. The duration of the attack rarely exceeds a single day. Closely associated with these disorders are the various transient perversions of sensation that may be felt in the Eustachian tubes, the pharynx, and about the fauces. Another of the symptoms of masked rheumatism is a peculiar and disagreeable feeling in the tongue. This sometimes assumes the severity of a genuine neuralgia, and manifests a greater degree of persistence when asssociated with obesity, diabetes, or gout than when related to rheumatism alone. The esophagus and fauces and sometimes the muscles of the eyeballs are similarly affected. Often there is a paroxysmal cough, associated with headache. The most distressing of all these forms of pain is gastralgia. The previous history and the concurrence of other rheumatic symptoms of a more stable character will, of course, add greatly to the certainty of the diagnosis.

Dr. Smith Baker, of Utica, read a paper entitled

"HETEROGENEOUS PERSONALITY

which he defined as that condition in which the characteristics of ancestry are not blended into a permanent whole. He reported the case of a little girl who presented frequently recurring attacks of functional perversions and distress, which could not be satisfactorily explained except upon the inference that the dissimilar traits noticeable in her grandparents had not been blended in the personality of her mother and so had proved to be the ground field of the grand-child's affection. The question as to the legitimacy of such a view can never be answered intelligently until the commoner facts of family life shall have been more minutely studied. Thus, such trite matters as dreams, somnambulism, the solving of problems unconsciously, or subconsciously, the up-rush of facts and arguments in the act of composition, and the play of genius, should be investigated.

Inquiries in states of acute illness, and the study of moods and transformations of character, etc., all should receive more attention by physicians in order that causation in cases of functional derangement may be the more accurately conceived. In doing this, assistance may be found in many instances of so-called reflex disease. Heterogeneous personality should always be looked for in the neuropathic constitution; but more particularly is this of use in considering the problems presented by neurasthenia and the sexual perversions. Not so frequently, perhaps, is the trouble owing to the commonly assumed overwork, etc., as to the unceasing warfare within between the "lower" impulse and the "higher" determination. Students, professional men, and many others whose physical abnormities or mental peculiarities reveal the sensitive, easily impressed nature, are especially prone to be victims of the uncoalesced personality. Its bearing upon questions of marriage and parentage renders it worthy the attention of all.

Dr. Lyons, of New York, referred to the opposite sides of character as seen among the insane. An educated woman may be agreable and loveable in her normal condition, but vicious when in the abnormal state. The case of a patient was related who would frequently apologize and do her utmost to resist the impulses to do wrong. The opinion was expressed that such behavior might be due to abnormity in the development of the cerebral hemispheres or to some interference with the circulation.

Dr. Parsons, of Sing Sing, expressed the view that the tendency to evil thinking and acting observed in some persons might be overcome by suitable environment. The absence of restraint, after a time, permits of a continuance or permanency of the abnormal condition.

Dr. Hinsdale, of Philadelphia, spoke of two authenticated cases of double-consciousness. He maintained that the medico-legal features of such cases, as well as those of changes in personality, are of special interest and should be reported and carefully analyzed.

Dr. Seguin, of New York, held that atavism is the more rational explanation. Blending of the characteristics of ancestors occurs normally. It is not right to confuse double consciousness of an epileptic nature with conflicts of character and personality.

Dr. J. J. Putnam, of Boston, said that the treatment rested upon the systematic development of character. Hypnotism has taught much in regard to this condition and brings out in a striking manner certain phases of character. He recommended the development of the inhibitory powers.

Dr. F. X. Dercum, of Philadelphia, stated that the case reported by Dr. Baker recalled the fact that there is lower vitality at certain epochs in women. Relation-

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ships between states of health might account for the peculiar mental variations.

Dr. Baker referred to the various definitions of personality as not being sufficiently inclusive of the facts to be of accurate use. He urged the importance of the study of the subject, especially in its bearing not only upon the causation of actual disease, but in its relation to educational ideas and practices as found to-day in our school system. In this way may be found means of obviating detrimental traits, and also of making dominant those more desirable and healthful.

Dr. Matthew D. Field, of New York, read a paper entitled

DETENTION-HOSPITALS FOR THE INSANE.

After speaking of the wrongs inflicted upon the insane by committing them to county jails and prisons, there to mingle with tramps while awaiting the appointing of physicians to pronounce upon their mental condition, he gave a description of the Reception Pavilion for the Insane at Bellevue Hospital, and the methods of examination and commitment by the city examiners. He declared the pavillion to be in every respect a hospital with resident physicians and competent trained attendants. Though a plain and inexpensive building, it served its purpose very well. He advocated the establishment in all large cities of similar hospitals for the reception of those suspected of lunacy. He said that an ideal institution for this purpose would be a hospital constructed on the pavilion-plan for the reception of the insane, inebriate, and neurotic, with a small amphitheater and sufficient wards for proper classification and detention for a reasonable time. A competent visiting, resident, and examining staff of medical officers should be chosen and clinical instruction regularly given. Such a hospital would secure prompt, humane, and scientific treatment. The opportunity for longer observation, securing histories and examinations, would result in more complete and accurate certification. There being no need for hasty transfer to other institutions, the feeble, sick, and certain selected cases could be detained for treatment, and clinical instruction would be easily accessible to the entire medical profession.

Dr. Knapp, of Boston, said that there are no detention-hospitals in Boston, and that no urgent need for them has been felt under existing laws. A few emergency cases requiring immediate restraint are admitted to the general hospitals. Others can be taken at once to the nearest asylum on emergency certificates. These consist of two separate certificates. A bond must be given by the the superintendent, or one of the physicians, to the effect that the patient is to be formally committed, or released within five days. This system has proved eminently satisfactory, and has rarely been abused.

Dr. Mills, of Philadelphia, stated that the method described by Dr. Field is in vogue at the Philadelphia Hospital. There is a detention-ward for isolating cases of insanity. Two physicians are assigned to examine these patients before commitment. This ward has also been used for several years for clinical instruction.

Dr. Preston, of Baltimore, remarked that the lunacy laws of Maryland are inadequate. Endeavors are being made to establish a detention-ward. At present insane patients are kept at police-stations, as no general hospital is prepared to receive them. This method of dealing is entirely unsatisfactory.

The president said that in Chicago there is detention-ward in the City Hospital in which cases of insanity are kept until transferred. The commitment laws of Illinois are now quite satisfactory.

Dr. Frederick Peterson, of New York, read a paper upon

THE TEMPERATURE IN GENERAL PARALYSIS OF THE INSANE,

which was based upon observations, made with the assistance of Dr. Langdon, on twenty five cases in the wards of the Hudson River State Hospital for the Insane. The temperature was taken every two hours for one week in each case, and in ten cases in the two axillæ simultaneously from every two to four hours for a week. It was found that the average bodily temperature corresponded with physiologic norms. The diurnal oscillations also corresponded to physiologic norms. Asymmetric axillary differences were so small that they could not be considered as abnormal, and certainly not of any diagnostic significance.

When unusual variations of temperature occur in general paretics, the cause must be sought for in conditions not related to the pathologic phenomena, but depending upon other thermogenic features unrecognized by the physician, or "masked" by the mental state of the patient. Thus, in one case an increasing hyperpyrexia was noted during the second week, but the pneumonia causing it was "masked" until the fifth or sixth day, the patient dying on the sixth day. In another case, in which the highest single daily oscillation was 35°, and the average daily oscillations for the week 2 2° Fahr., the patient had bedsores on the sacrum and heels, and was undoubtedly septicemic. That the temperature might vary in the paralytic seizures of these cases was not gainsaid, no observations having been taken in such conditions.

Dr. Gray, of New York, said that a large number of different pathologic conditions are often included under the name of general paresis. Some represent the terminal stages of intra-cranial syphilis.

Dr. Charles K. Mills, of Philadelphia, said that the diversity of the manifestations of general paresis will account for the different experience of various observers.

Dr. Joseph Collins, of New York, read a paper entitled

THE ANATOMICAL CHANGES IN THE SPINAL CORD IN AN OLD CASE OF INFANTILE PARALYSIS,

demonstrating numerous sections and reporting the history of a case.

Dr. G. M. Hammond, of New York, read a paper an

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Progressive Muscular Atrophy.

He exhibited microscopic specimens and made a pathologic report of two cases, and referred to the fact that considerable confusion is occasioned by the misapplication of the term "peroneal type" to a disease totally dissimilar to the one under consideratiun.

The first patient was a woman, forty-six years old, without a history of gout, rheumatism, or syphilis, who a few days after stumbling over a chair and bruising the right shin slightly, was unable to walk as well as previously. In a little while marked weakness of the flexors of the foot and the extensors of the toes developed. In the course of a year there was complete paralysis of the entire right leg, with reaction of degeneration, loss of power, and of electric contractility in the anterior tibial muscles of the left leg, and atrophy and loss of power in the thenar and hypothenar musclesof the right hand. Gradually but rapidly the other extremities became involved, and ultimately the abdominal and intercostal muscles were affected. Death took place suddenly from either cardiac or respiratory paralysis.

The sections of the cord showed sclerosis of the pyramidal tracts and atrophy of cells in the anterior horns, and degeneration of Gowers' column throughout its entire extent. The conclusion to be drawn from the clinico-pathologic study of this case is that the muscles of the hand were supplied from the mesial group, and the muscles of the forearm from the anterior group of cells in the anterior horn.

In the second case the disease only affected the muscles of the left thumb. The patient was under observation for eleven years. The case ran the usual course, and was in every way typical. At the time of death all of the museles from the level of the armpits upward, except the facial muscles, were atrophied, as well as those of the upper extremities. The woman became maniacal, and finally died from exhaustion.

The cord and medulla were examined, and the changes were identical with those described in the preceding case.

The conclusion was reached that these case demonstrate that progressive muscular atrophy is due to a degeneration of the cells in the anterior gray masses and the antero lateral white columns; also, that it is superfluous to divide progressive muscular atrophy into different types, because the disease does not invariably begin in the same group of muscles.

Dr. Sachs said that while there could be no doubt that the Aran-Duchenne type is of spinal origin, it is not certain that the case of Dr. Hammond represented the peroneal form of progressive muscular atrophy as described by Charcot, Tooth, Hoffman, and himself. If the case were such a one, the findings in the spinal cord would have been of great importance. There is yet doubt whether the peroneal form represents a spinal disease or a peripheral affection.

Dr. Putnam referred to a case of progressive muscular atrophy in an adult in which there was rapid destruction of gray matter throughout the cord. Despite the violence of the process, portions of the anterior and lateral cell-groups were preserved.

Dr. F. X. Dercum, of Philadelphia, read a paper entitled

Optic Neuritis, Blindness, Deafness, and the Knee-Jerk in Cerebellar Disease.

He said that many of the symptoms of cerebellar disease are both inconstant and variable. They are difficult of explanation and frequently impossible to correlate.

Seven cases were reported in which optic neuritis, blindness, deafness, and modifications of the knee-jerks were present.

It is a matter of common experience that high grades of neuritis may exist without marked impairment of vision. It seems, therefore, that the added symptom of blindness gives a special significance to the optic neuritis found in these cases. It appears that if for any reason optic neuritis is present in cerebellar disease, it is likely to be intense in degree, and sooner or later associated with total blindness.

The proximity of the quadrigeminal bodies has naturally suggested itself as in some way explaining this blindness. The ataxia and titubation at once suggest disease of the vermiform process. Anatomic considerations, as well as the results of the autopsy in one of the cases, show that if a growth be situated in the vermiform process, especially anteriorly, and if the growth continue to enlarge, it will sooner or later press upon the superior cerebellar peduncles and very probably upon the quadrigeminal bodies themselves. If the relation of the fibers of the optic tract to the primary optic centers be recalled, it can readily be understood how a neuritis should result if pressure or irritation occur at this point.The directness of the irritation will explain why the neuritis should be of a high grade, and, sooner or later, associated with total blindness.

The deafness present in some cases of cerebellar tumor may perhaps be explained in a similar manner. The studies of Spitzka, Monakow, and others, have made it extremely probable that the posterior quadrigeminal bodies stand in the same relation to the auditory fibers as do the anterior to the optic fibers. It would simply be necessary, therefore, that the pressure involve these structures in order that deafness should be a symptom.

The condition of the knee jerk presents a problem of peculiar difficulty. The loss of knee-jerk in disease of the cerebellum may be ascribed to loss of muscle-tonus.

It is extremely probable that lesions of the cerebellum act as do lesions elsewhere, in one of two ways, *i. e.*, either by destroying tissue, and thus destroying function, or by causing irritation. It is, perhaps, in this way that the fact can be accounted for that in some cases of cerebellar disease the knee jerk is absent and in others present or even exaggerated.

When the disease was advanced there was loss of reflex action to light-

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Dr. Putnam spoke of a case of long-standing optic atrophy, with practically no other symptom. Although the optic neuritis persisted for two years, the autopsy showed a cyst and tumor of the cerebellum.

Dr. Preston said that he had noted loss of the muscular sense in two patients. In four cases the knee-jerks were irregular, disappearing and occasionally returning.

Dr. Knapp said that in all of his cases confirmed by autopsy there was neuritis or optic atrophy. In one case in which a cerebellar tumor was suspected, neuritis had not developed. Blindness had not been so constant In another case the light reflex was lost when the pupils became dilated. Pressure on the corpora quadrigemina is most likely to produce blindness. Dr. Knapp has never noted deafness. He considered untenable the view that disease of the middle lobe of the cerebellum is responsible for the atactic gait.

Dr. Leszynsky, of New York, expressed the view that the concomitant basal meningitis has much to do with the production of the optie neuritis, by extension of the inflammatory process along the nerve-sheath. In many cases the neuritis is a late symptom. When the neuritis or optic atrophy is accompanied by loss of light-perception, the pupillary reflex is always absent.

Dr. C. L. Walton, of Boston, read a paper entitled

A New Method for the Reduction of Dislocation of the Cervical Vertebrae.

In illustration of the method, let it be supposed that the left articular process of one vertebra has slipped forward over that of the vertebra below, and has fallen into the depression anterior to the articular process. This bends the head to the left, and turns the face to the right. The reduction is accomplished by extending the head diagonally backward to the right, so as to elevate the articular process, after which rotation to the left replaces the displaced vertebra. The transverse processes on the right act as a fulcrum. The ligaments that hold the vertebra firmly in the false position make o opposition to this maneuver, which requires no rce.

In bilateral dislocation the same movements should e made, first on one side, then on the other.

[to be continued.]

American Public Health Association.—The twenty-first annual meeting of the association will be held at Chicago, October 9 to 14, 1893, and the convention with the World's Congress Auxiliary of the World's Columbian Exposition will constitute an International Congress of Public Health.

The American Public Health Association was organized in 1872, by a few public-spirited men who foresaw the need of bringing together in one body the ablest sanitarians in the country, for the purpose of inaugurating measures for the restriction and prevention of contagious and infectious diseases, and for the diffusion of sanitary knowledge among the people. The growth of the Association and the work it has accomplished more than justify its existence. Its membership has been augmented from year to year until it now constitutes the largest and the strongest sanitary body in the world and embraces in territorial extent the United States, the Dominion of Canada, and the Republic of Mexico. Under the impetus given by its work, state and local boards of health and sanitary associations have been organized, sanitary publications increased, and hygienic knowledge widely and extensively diffused. The Association has already published eighteen large and valuable volumes, increasing at the rate of one a year, and containing the papers, reports, and discussions presented at the annual meetings. These volumes constitute in themselves a library upon sanitation; they are elegantly printed and bound, and are alone worth more to any person interested in hygiene than the cost of membership. Each member is entitled to the annual volume, delivered free of expense. In addition thereto, the Association has published a standard work upon "Disinfection and Disinfectants," besides the Lomb Prize Essays, now so widely known to the American public.

Among its members may be found physicians, lawyers, ministers, civil and sanitary engineers, health officers, teachers, plumbers, merchants, etc.,—in fact, every profession and many of the industries are represented in its list of members. The only qualifications required for membership are a good moral character, an interest in hygiene, and the endorsement of two members of the Association. Cost of membeship, five dollars a year. For blank applications for membership, or particulars relating to the Association, address the secretary.

BOOK REVIEWS

A Treatise on Ophthalmology for the General Practitioner—By Adolf Alt, M.D.; J. H. Chambers & Co., publishers, 914 Locust Street, St. Louis, Mo.

The second revised and enlarged edition of this exceedingly practical work is considerably more voluminous than the first edition. It contains one hundred and forty illustrations and is written throughout in a clear and easily comprehensible style, and in general makes the impression of originality.

All the chapters in Ophthalmology that are of real value to the general practitioner are treated in a clear and concise manner, giving all that is important without encumbering the memory with such details as would have to be considered in a work for the specialist only.

For the use of the general practitioner as well as the student, we know of no other work that could be more highly recommended.

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NOTES AND ITEMS

The Proposed Bill of the New York Academy of Medicine to Establish a National Health-Bureau.—As reported by the Committee of the Academy, the following is the proposal:

A Bill to establish within the Treasury Department a Bureau of Public Health.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

SECTION 1. That for the purpose of this Act the States and Territories of the United States be and are hereby grouped into districts, to be known as "the sanitary districts of the United States," as follows:

The Northern Sanitary District shall include the States of Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Wisconsin.

The Northeastern Sanitary District shall include the States of Connecticut, Massachusetts, Maine, New Hampshire, New York. Rhode Island, Vermont.

The Northwestern Sanitary District shall include the States of Idaho, Montana, North Dakota, Oregon, Washington, and the Territory of Alaska.

The Eastern Sanitary District shall include the States of Delaware, Maryland, New Jersey, Pennsylvania, Virginia, West Virginia and the District of Columbia.

The Western Sanitary District shall include the States of California, Nevada, Utah, and the Territory of Arizona.

The Southern Sanitary District shall include the States of Arkansas, Alabama, Kentucky, Louisiana, Missouri, Mississippi and Tennessee.

The Southeastern Sanitary District shall include the State of Texas, and the Territories of Indian Territory, New Mexico and Oklahoma.

The Central Sanitary District shall include the States of Colorado, Kansas, Nebraska, South Dakota, and Wyoming.

THE HEALTH-BUREAU.

SECTION 2. That there shall be established in the Treasury Department, under the direction and supervision of the Secretary thereof, a Bureau of Public Health, to consist of a commission of fifteen, of whom eleven shall be appointed by the President, by and with the advice of the Senate, as follows, viz.: One medical commissioner from each of the "Sanitary Districts of the United States," provided in Section 1 of this Act, and two commissioners at large; the compensation of the medical commissioners, when actually engaged in the performance of their duties under this Act, shall be $10 per diem and reasonable expenses.

The other four members shall be the Surgeon-General of the Army, the Surgeon General of the Navy, the Supervising Surgeon-General of the Marine Hospital Service, and an officer learned in the law, detailed by the Attorney General from the Department of Justice. These four members shall receive no compensation.

ANNUAL SESSION AT WASHINGTON

SECTION 3. That the members of the commission shall meet at such time and place as may be designated by the Secretary of the Treasury, and organize by the election from their own number of a president who shall be one of the members at large and who shall receive $5 per diem in addition to the $10 per diem provided in the last section, when actually engaged in the performance of his duties under this Act.

The commission may appoint a secretary, not one of its number, and fix his salary at a sum not exceeding $3,000 annually. The commission shall thereafter meet annually at Washington, on the first Tuesday of October, and at such other times and places as the president of the commission, with the approval of the Secretaty of the Treasury, shall designate.

A COMMITTEE OF HEALTH-SENTINELS.

SECTION 4. That there shall be an Executive Committee of the commission, consisting of its president, the Surgeon General of the Army, the Surgeon-General of the Navy, and the Supervising Surgeon-General of the Marine-Hospital Service and the officer detailed by the Attorney-General.

The commission shall from time to time prescribe the duties of the Executive Committee, and may make all needful rules and regulations for its own control and for the guidance and discipline of all its officers and employes, and shall establish all rules and regulations for the government of national sanitation in all of its foreign and inter-State relations and special departments in the enforcement of the provisions of this Act.

EXTRAORDINARY CONFERENCES WITH STATES.

SECTION 5. That when, in the opinion of the president of the commission, the interests of the public health would be promoted by a conference of the commission with the State Boards of Health of the several States, or of any sanitary district or districts, he is hereby authorized to invite, with the approval of the Secretary of the Treasury, said State Boards of Health, or such number thereof as he may designate, each to delegate one of its members to meet the commission in conference at such time and place as he may appoint. The president of the commission shall be the president, and the secretary of the commission shall be the secretary of any such conference. The delegate in attendance upon the conference from each State Board of Health shall be entitled to receive reasonable compensation for expenses for a session not exceeding three days, to be paid on vouchers provided by the Secretary of the Treasury.

Medical Practice in Colorado.—The Colorado State Board of Medical Examiners announces that hereafter it will recognize only diplomas from three-year schools as entitling their holders to license. The courses of lectures must have been of at least twenty weeks each, and have been given in three separate years,

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and a preliminary examination must have been required. Instruction must have been given in anatomy, chemistry, physiology, pathology, materia medica and therapeutics, obstetrics and gynecology, surgery, medical jurisprudence, theory and practice of medicine and hygiene.

In default of such a diploma the candidate for license must pass an examination in anatomy, chemistry, physiology, pathology, surgery, obstetrics and gynecology, and theory and practice of medicine.

Doctors' and Lawyers's Fees.—We had a great excitement a few weeks ago in San Francisco (*Pacific Med. Jour.*). Men who scarcely knew each other and were in the habit of passing with the slightest recognition, stopped, clasped each other's hands, looked earnestly into each other's faces, spoke in a subdued tone of voice and showed all the evidence of having heard portentious news. Nothing else was talked of at the clubs, chestnuts were at a discount, and even club scandal was neglected for the time. The great daily papers as well as the weekly news scavengers lent their assistance to fan the popular excitement. John W. Mackay, the many times millionaire, had been shot by a would-be assassin; this, however, was not the cause of the excitement (shooting a man, even a millionaire, in California, has long since ceased to be a novelty). The excitement was about the fact that two medical gentlemen who extracted the bullet and saved the millionaire's life had charged him $12,500. For the too little sympathy that the millionaire received when he was shot, everybody, press and paper, made up for the neglect now. Millionaires congratulated each other that they were not in need of medical service, and hoped when their taking off time came, their departure would be a sudden one—no chance for a physician to wreck their estate. The foolish fellows tn their excite ment forgot that their estates were in no danger of be ing wrecked, forgot that their attorneys would protect it.

Since recovery from his wounds and the $12,500 indignation shock, he has asked the probate court for per mission to distribute the property and close an estate for which he was executor. Among the items of expense which he incurred as executor of this estate, is attorney fees $26,160; for what? for piloting this will through the probate court, an automatic procedure that required neither skill, ability, learning nor judgment. Will John W. Mackay explain why he was willing to allow the attorney $56,160 for the service rendered, and refused to pay his physicians $12,500 for services that required much more individual skill and judgment and a thousand times more responsibility on their part than was required of the attorney? The $26,160 item created no excitement, but one newspaper seems to have noticed it, and congratulated the attorney on having received a good fee. Perhaps the daily cr weekly press will explain why a millionaire should not pay a physician as liberally as he does an attorney.

Another attorney of this city is receiving the congratulations of the press and his friends on the receipt a few days ago of a fee of $75,000. The attorney received one fifth interest in the estate, which was then involved in litigation. What would be thought of a physician who would undertake to cure a patient for a certain interest in his (the patient's) estate?

A Healthy Month.—Dr. J. R. Laine, Secretary of the State Board of Health (*Pacific Med. Jour.*), in his report for June, 1893, from ninety-seven cities, villages, towns and sanitary districts, aggregating a population of eight hundred and twenty-six thousand seven hundred and ninety-four, gives a mortality of nine hundred and sixty-one from all causes. This corresponds to a death rate of 1.16 per thousand per month, or 13.92 per annum.

There were one hundred and forty-six deaths due to consumption, sixty seven to pneumonia, twenty.three to bronchitis, two to congestion of the lungs, fifteen to diarrhœa and dysentery, twenty three to cholera infantum, sixty-four to other diseases of the stomach and bowels, ten to diphtheria, four to croup, seven to scarlatina, one to measles, four to whooping cough, thirty-five to typhoid fever, four to malarial fevers, eight to cerebro spinal fever, twenty-nine to cancer, one to erysipelas, seventy-one to diseases of the heart, eight to alcoholism and four hundred and thirty-nine to all other causes.

One of Bismarck's Habits.—Once when Bismarck was a cavalry officer he was standing with some other officers on a bridge over a lake. As he was about to give an order his groom, Hildebrand, rode one of the horses to water close by the bridge. Suddenly the horse lost footing, and Hildebrand, clinging to the animal, disappeared with it in the water. Before the other officers could collect their senses Bismarck had cast off his sword and his uniform and had thrown himself in the lake to save his servant. By good fortune he seized him, but the man clung to him so closely in his death agony that he had to dive before he could loose himself from him. Bismarck rose to the surface, raising his servant with him, and brought him safe to land in an unconscious condition. The next day the servant was as well as ever. But the little town that had witnessed the brave rescue was in great commotion. They petitioned the superintendent, who obtained for the young officer the medallion "for rescue from danger." And now on great occasions, the well-known Prussian safety medal may be seen beside the proudest stars in Christendom on the breast of the famous creator of united Germany. Bismarck, it is said, is prouder of his first medal than of all the rest put together. One day in the plenitude of Bismarck's power a noble minister approached the premier, and with a tinge of satire asked him the meaning of this modest decoration. He at once replied: "I am in the habit sometimes of saving life." The diplomatist lowered his eyes before the

look which accompanied Bismarck's lightly spoken words.—*Chicago Herald.*

Immunity Against Diphtheria.—Bardach has recently shown (Wratch, No. 6), that the serum of dogs, rendered immune by repeated inoculations, may be used for rendering immune the rabbit, the guinea pig and the mole. It may also be used curatively, the infected animals being inoculated by subcutaneous injections of dog serum, it is found to be perfectly innocuous.

Study of the Lines of Fingerprints.—In a recent publication Dr. Galton, who has made himself famous by his study of the lines of the finger print, reports that after fourteen years the finger prints of certain individuals give the same ridges even under a magnifying glass. He says that the Bengal police are in the habit of taking the print of a single finger in order to identify criminals.

Hypnotism in Russia.—Hypnotic suggestion as a therapeutic remedy has received official sanction in Russia. The government has announced that physicians may have the right to apply hypnotism in the care of the sick, on the sole condition that they report to the authorities each case of its application with the names of the physicians present at the time. All announcements of "private sittings" is forbidden.

Rectal Alimentation.—Huber has recently shown by actual experimentation, that from 58 per cent to 70 per cent of fluid egg albumen may be absorbed from the rectum without peptonization. A slightly larger proportion of albumen was absorbed after peptonization, but less than half as much when chloride of sodium was not added. The proportion of salt found necessary to stimulate absorption, was one gram, or one-fourth of a dram for each egg.

Influence of Cold Baths upon the Urine.—According to Winternitz, the quantity of toxines contained in the urine, in typhoid fever, is increased six or eight times by means of a cold bath, indicating that by the application of cold, in some way, there is an increased elimination of these poisonous matters from the body. This may possibly be connected with the fact that, as has been shown by Winternitz, the application of cold to the part results in an accumulation of leucocytes.

The Relation of Wealth to Health.—Mr. Marcus T. Reynolds is the author of the prize essay of the American Ecanomic Association on "The Housing of the Poor in American cities." It is a work full of instruction, and inspired by the noblest spirit. From it we learn the unexpected fact that the death-rate of the tenement-house population of New York is slightly lower than that of the remaining population of the city, or, in other words, that the death-rate is highest in the houses containing the fewest inhabitants. It seems that the death-rate of persons of five years of age and over decreases with the increase in number of tenants, while the death rate of children under five years increases until there are more than eighty tenants to a house, after which it decreases. The explanation of Mr. Reynolds is that the tenants of the larger houses are under closer sanitary inspection, and also that the removal thence of the sick to hospitals is more frequent. He suggests, too, as a possible reason for the lower death-rate of "the poorer classes," that "they pass much of their lives out of doors, and when indoors live in rooms without carpets or papered walls to catch and propagate micro organisms, with bare floors that are washed frequently."

The Electrocution of Taylor.—The execution of the murderer Taylor at Auburn Prison on July 27, was acomplished in a very unsatisfactory manner. Immediately after the first shock, which rendered the man unconscious but did not destroy life, the armature of the dynamo became burned out and the instrument was consequently useless. It therefore became necessary to make connection with the Auburn city electric-lighting plant, and there was a delay of an hour before the second, and successful, application of the current. Among the spectators on this occasion was Dr. Nettie E. Jenkins, who was the first woman to witness an execution by electricity. She will probably not be anxious to witness another very soon.—*Boston Medical and Surgical Journal.*

Influence of Ablation of the Spleen on the Microbicide Power of the Blood.—Dr. Montuori (*Brit. Med. Jour.*) has published the results of some observations on this subject. His method was simply to remove the spleen, preferably from dogs and rabbits, and after a given time to test the bactericidal power of the blood of the animal. His conclusions are as follows:

1. Removal of the spleen is followed by a manifestation of a gradual diminution of the bactericidal power of the blood. This power generally remains about normal for the first fifteen days, being gradually lost between the fifteenth and the thirtieth day.

2. After a time varying from two to four months the bactericidal power gradually returns, and is completely restored in about four months.

3. These effects take place more rapidly in young than in old individuals, and more rapidly in rabbits than in dogs.

4. The germicidal substance is, in Montuori's opinion, of the nature of a ferment.

5. After splenectomy the blood loses not only its germicidal power, but also its power of destroying the corpuscles of other animals introduced by transfusion.

6. The same applies also to the bactericidal powers of the other juices of the body.

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Paraplegia of Syphilitic Origin—Improvement in this disease can be reasonably expected from the liberal administration of the Elixir Six Iodides (W. G.'s). Paraplegias attended with severe pains are specially submissive to this remedy. See advertisement.

Waite & Bartlett, of 143 E. Twenty-third Street, New York, show in their fine exhibit at the World's Fair the largest Holtz static machine of their manufacture in the world. This firm has become justly celebrated for the excellent character of their apparatus and the conscientious character of their dealings. See their advertisement.

Spermatorrhea.—Whether imaginary or real, this condition is scarcly less a source of annoyance to the physician than to the sufferer. The Bromides and Cannabis Indica in Neurosine very promptly relieves these cases, while the Bromide of Zinc seems to act as a permanent nerve tonic, and better results are obtained from the use of Neurosine than with any other singleremedy. See ad page.

Salo-Sedatus—Try It for Yourself.—The Proprietors of Salo-Sedatus do not ask anybody to take for granted what they and others say and write about it, but they do earnestly request all Physicians to try it for themselves. Free Samples, in Powder and Tablets, sent to all Physicians who write and ask for them. A pamphlet, fully describing its use. sent with each sample. See ad, page 11.

Rheumatism.—Rozell Culberson, one year ago, from exposure in wet weather, was attacked with the worst case of rheumatism in the limbs and shoulders and finally the heart and lungs became involved. After the use of Andunea for three months he was entirely relieved. I have been using Andunea for nearly twelve months. I can refer to more than a dozen cases of rheumatism and Neuralgia that have been relieved by this remedy.

S. F. CULBERSON, Snyder, Texas.

Sennine.—The advertisement of Sennine "The New Antiseptic" appears for the first time in this issue. A product of Phenol and Boracic Acid, the two best germicides known—in powder form (2-oz. tin boxes with inner top perforated for convenience in applying on wound surfaces) and readily soluble, five parts of Sennine dissolved in one hundred parts of water is of sufficient strength for an antiseptic wash. Comparatively inexpensive. Non-poisonous and free from disgusting odor. Safe internally as well as externally, thus promising much in general medicine as well as surgery. We bespeak an early trial of Sennine by our patrons. Free sample sent upon application. Dios Chemical Co., St. Louis.

Our Attention was called some time ago to the remarkable results attained in pneumonia, by Dr. Reyburn, of the Medico-Chirurgical Hospital, Philadelphia, by the use of Febricide, and we have made extended trial of it, the results of which convince us that it is a complete antipyretic, a restorative of the highest order, and an anodyne of great curative power. The pills are made without excipient, with only coating sufficient to cover the taste, and their solubility is therefore almost instantaneous, and consequently the effect is prompt. Febricide is stated to be possessed of great curative power in malarial affections, and in all diseases of which fever is an accompaniment, such as pleurisy, pneumonia, bronchitis, rheumatism, etc. It is also of inestimable value in neuralgia or myalgia, while for sick headache is appears to be almost a specific. In all cases of exhaustion Febricide may be relied upon to act as a restorative of the very highest character. We believe a trial will assure you that all we have said concerning it is warranted.—Massachusetts *Medical Journal*.

The Geneso Cart.—When at the World's Columbian Exposition don't fail to see D. F. Sargent & Son's (Geneso, Ill.) exhibit of Fine Carts, 385 square feet, in the Transportation Building, Section A, Block 1. See their advertisement in this issue.

Menstrual Derangements.—Few women are free from those tormenting headaches, backaches, ovarian neuralgias, gastric and vesical irritations during the menstrual molimen, and which are so distressing as to drive a much larger number to the use of opium than is generally suspected. Dioviburnia contains no opium but is equally efficient in giving relief and at the same time cures by its tonic and alterative effect. See ad page.

A New Battery, known as the Goelet Faradic Battery, has been recently placed on the Market by the Galvano-Faradic Manufacturing Company, of New York. A feature of this Battery is the new form of vibrator which may be adjusted to give from 10,000 to 50,000 interruptions per minute, producing wonderfully sedative effects. The Battery has several secondary coils of varying lengths and sizes of wire. For particulars see advertisement.

Antikamnia.—L. B. Grandy, M.D., Demonstrator of Anatomy and Microscopy, Southern Medical College, Atlanta, Ga., says: "Antikamnia has given me the most happy results in the headaches and other disagreeable head symptoms that have accompanied the late catarrhal troubles prevailing in this section. In my practice it is now the remedy for Headache and Neuralgia, some cases yielding to it which had heretofore resisted everything else except morphine. I usually begin with ten-grain dose, and then give five grains every fifteen minutes until relief is obtained. A refreshing sleep is often produced. There seem to be no disagreeable after-effects."

Alumnol is recommended as an antiseptic astringent. It is an aluminium salt of a naphthol-sulphonic acid. It is quite soluble in hot or cold water and in glycerine; less so in alcohol, and insoluble in ether. As an antiseptic, a one per cent solution kills anthrax spores after twenty-four hours; while 0.01 per cent solutions retard the development of most tonic organisms, and 0.4 per cent solutions absolutely prevent all growth. In ten or twenty per cent solutions it is not corrosive, but causes violent irritation. It is especially useful in gonorrhea, as it penetrates deeply into the tissues. Pencils of two to twenty per cent were used, the strength varying with the quickness of the effect desired. See the advertisement.

An Elegant Engraving.—Few other than strictly technical pictures are found upon the walls of Physicians' Reception Rooms. The market rarely affords examples calculated to appeal to the taste of that Profession as illustrating Medical and Surgical subjects and being at the same time of a decorative and artistic character. The elegant Engraving of Dr. Harvey demonstrating to Charles the First his theory of the Circulation of the Blood has just been published, and until now this Engraving, by reason of its great cost, has been practically out of the reach of many who otherwise would have desired it.

We therefore have the pleasure of offering the same to the readers of THE REVIEW at a very low price. Of the excellency of this picture we can only say that it is an exact copy of India proof engraving, printed on extra heavy paper suitable for framing, and we feel confident that the purchasers who choose to avail themselves of this opportunity to obtain this beautiful ornament for their offices and reception rooms will be pleased with it.

We refer you to the advertisement on page 10

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MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

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ORIGINAL ARTICLES

Metritis.

BY WM. M. CUNNINGHAM, A B,, M.D., BASTROP, TEXAS.

Read before the Texas State Medical Association in Galveston, May 4, 1893.

MR. PRESIDENT AND GENTLEMEN OF THE TEXAS STATE MEDICAL ASSOCIATION.—I am before you by invitation from the Chairman and Secretary of the Section on Gynecology, and desire to present a brief discussion on two important forms of metritis, viz., cervical and corporeal endometritis: or in simpler words, the inflammation of the mucous membrane lining the cervical canal, and that of the cavity of the womb. And more especially, the treatment of the chronic forms of the inflammation.

The cervical variety is the most frequent disease of all uterine disorders, while the corporeal disease is not of very frequent occurrence. Inflammation of the womb is limited in the great majority of cases to the cervical canal, invading about half of the vaginal cervix, and ending at the "os uteri internum."

It seems that a wise providence has placed around the internal mouth of the womb, circular muscular fibers, with alert contractile power, as a guardian angel, to protect the nursery of the embryonic life, from the invasions of all forms of sepsis.

The anatomical structure of the mucous membrane of the cervix being arranged in many sulci, in which the germs of disease may find lodgment, and it being more exposed to the causes of inflammation, may account for its being diseased more often than that of the cavity, which is a smooth mucous membrane.

Yet, the causes of inflammation sometimes get into the inner chamber of the womb: In the shape of a long neglected catarrh of the cervix; by accident in parturition; in the reckless use of obstetrical forceps, which may be unclean; by the careless use of the uterine probe, or other gynecological instruments in the absence of antiseptics; by excessive excitation of the generative organs; by exposure; and by many traumatisms and sepsis. The inflammation excited destroys the integrity of the mucous membrane, and its many utricular glands; unbalances the physiological functions of the womb; menstruation is deranged; the poor, unhappy woman is an invalid; and will usually remain so until the menopause, if not relieved by gynecological treatment.

Inflammation in the cervix or body of the womb, as is its nature wherever occurring, may be acute or chronic. In a great number of cases the acute inflammation of the mucous membrane of the womb, in its pathology, amounts to nothing more than an acute congestion, or hyperemia, which soon pass away in the presence of rest and cleanliness, and leaves no mark of violence, and the parts return to their normal state. Otherwise a chronic inflammation ensues, the acute the cause of the chronic.

The exanthematous variety of metritis, which occurs in the course of the eruptive fevers, which is always an acute affection, and which usually subsides with the constitutional disease, which caused it, when it occurs in the young, sometimes arrests the further growth and development of the womb, and the poor girl has to encounter the consequences, viz., vicarious, and painful, menstruation, with all of its manifold troubles, and the lonely solitude of many of being imparious.

The puerperal variety begins as an acute inflammation, in consequence of parturition, in the absence of cleanliness, and ends in a chronic endometritis. In this form of the disease, involution is frequently arrested, structural changes occur throughout the entire uterus, in consequence of the inflammation, the organ never returns to its natural size, and we have subinvolution complicating endometritis.

Gonorrhea is usually confined to the pudendum, vagina, and urethra; but, sometimes it makes an invasion higher up into the cervix, the cavity of the womb, into the Fallopian tubes and ovaries. The ovaries and tubes may become diseased in the course of any general endometritis; but, when the endometrium of the cervix and cavity is pouring forth an abundant purulent discharge, from the effects of a specific virus, the tubes and ovaries are very apt to undergo the changes of a ravaging inflammation. These cases are very obstinate. The causes of cervical and corporeal endometritis are many. The nomenclature of each and every cause would be impossible, and if I could name them all, my paper would become tiresome on account of its length. The

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causes are all embraced under the general terms of specific or sepsis, traumatism and chemical.

Stenosis is usually the result of destructive chemical agents, such as nitric or chromic acids, caustic, potash, pure nitrate of silver and the actual cautery.

It is not my aim to go largely into the history, etiology and pathology, of cervical and corporeal endometritis. Our text books are full of information on these subjects. But I do want to have something to say in regard to the treatment, which is the most imporrant of all subjects at present.

There are a great many of our women suffering from cervical endometritis, and many with corporeal endometritis. What shall we do with them? Shall we send them to the specialist in gynecology? The great majority of them are too poor to stand the trip physically and financially. Must they suffer on, taking a costly placebo, internal medication with no hope of recovery? Must we teach them that gynecological manipulations in the treatment of uterine diseases do more harm than good? Must these poor women still endure the aching head, the fluttering heart, the darting pains in their whole body, the constant backache, and soreness of abdomen, the neurasthenia, the derangements of menstruation, and the mortification of a constant dirty leucorrheal discharge, because a specialist in gynecology is not in every hamlet or neighborhood? No, gentlemen, no, let us do something for them. Under proper treatment a great number of them will be restored to health.

So much has been said and written concerning the difficulties to be encountered, and the danger and evil effects of entering the uterine cavity with gynecological instruments that it has made cowards of many, and we find the internal mouth of the womb closed, and strictly tiled, and the "sanctum sanctorum" of its cavity is the dwelling place only for the specialist.

Gentlemen, the claims of the age demand that every physician arm himself with a knowledge of these female diseases, and the implements to eradicate them.

The great majority of the cases of cervical and corporeal endometritis, will recover under the proper treatment. I do not allude to malignant inflammations, in which a total extirpation of the cancerous womb with its adnexa offer the only slender hope of cure. Nor do I allude to the specific variety of infiammations which have already disorganized the structure and physiological functions of the uterus, fallopian tubes and ovaries, in which laparotomy offers the only chance of recovery. But, I allude to those simple, catarrhal, traumatic and specific inflammations, limited to the cervix and body of the womb. The treatment is simple. Cleanliness, antiseptic stimulation of the adynamic parts, and free drainage, comprehend it all. The general system needs no medication, other than for any systemic wrong that may be present.

If there is a general debility, proper nourishment, proper exercise, and the administration of the chalybeate tonics, combined with some preparation of nux vomica, preferably the sulphate of strychnia, are very useful. Constipation, fluxes, diarrhoea, painful and burning micturition, and indigestion call for treatment. If there be any diathesis, predisposing the patient to certain diseases, prophylaxis should be instituted. For pain and rest and sleep opiates should not be prescribed regularly, and when given the patient should be ignorant of its use.

Internal medication alone will not cure any womb disease of a chronic nature.

I have said that cleanliness, proper stimulation of the asthenic parts and free drainage, comprehend the whole of a successful gynecological treatment of cervical and of corporeal endometritis. Let me explain briefly.

Cleanliness can not be effected without instituting free drainage, and the parts will not remain clean any length of time unless a good antiseptic or germicide, is used in the efforts to clean out of the cervical canal or cavity of the womb all effete matter. It may be a hypersecretion of the Nabothian or utricular glands to be removed. There may be purulent matter, granular formations, fungoid growths; everything foreign should be removed from the cervical canal or uterine cavity, if possible, and the parts washed out and stimulated with an antiseptic.

That long-continued headache, which has remained regardless of all headache medicines, will frequently be entirely relieved after the first radical treatment. That backache, soreness of abdomen, and those annoying irregular pains over body, and palpitating heart, in a few days will diminish and become quiet, sleep will be more peaceful, appetite better, the blood will be purer, the woman will improve in every particular, and if the cervical canal or cavity of womb is kept clean, the poor woman will in a very short time be well. But how is this radical treatment to be effected? That is the question. I can only tell you how I manipulate in the presence of these female diseases, and allow me to say that I have been often gratified with pleasing results. A woman presents herself with all the train of symptoms, which cause me to suspect an uterine disease. The pudendum and vagina being washed, my hands aseptic and immersed in a 1 to 1000 bichloride of mercury solution, my operating hand oiled with a 4 per cent carbolic acid and vaseline mixture, a digital and bimanual examination is made, and as much a diagnosis of the conditions of the pudendum, vagina, uterus, and its adnexa as is possible, is made. Pregnancy being excluded, a speculum, after being taken from the germicidal solution, and oiled with an antiseptic, is carefully introduced into the vagina and the cervix exposed. If I find a red erosion of the vaginal cervix, or the mucous membrane protruding from the external os, with or without minute ulcers dotting it everywhere, and a tenacious hypersecretion of the Nabothian glands, discolored or not with blood or shreds of broken down tissue, I decide that I have to deal with a case of cervical endometritis. If the flow from the cervix is more serous and less tenacious; the womb more or less swollen; menstruation deranged, appearing with pain; the flow being too little

and every few days; or being too much and continuing longer that what is physiological; and it may be a constant bloody flow; the backache and soreness of abdomen being more pronounced; pain being referred frequently to the mammæ, the head, the heart and over whole body; (pregnancy can usually be excluded, for these cases are generally sterile); then I decide that I have to deal with corporeal endometritis. I bathe the cervix with a 1 to 1000 bichloride of mercury solution, using a long nozzled uterine dressing syringe. Then all the effete matter is removed from the vagina, from around cervix, and as much as possible from the cervical canal or cavity of the womb, using uterine applicator and aseptic cotton for mops. The germicide wash is again used. Then all the remaining tenacious effete matter is removed from the cervical canal with an anti septic sharp curette.

If the disease is of the body, the cavity of the uterus is curetted, removing all foreign substances possible. Let me say here by way of parenthesis, the dull curette is of no good service only for removing clotted blood or some other loose foreign substance from the cavity of the womb.

I am aware that I encounter the teachings of many of our able gynecologists who have written our text books, in regard to the use of curettes. The most of them advise the use of the wire or dull curette. But I speak from experience. I have never gotten much benefit from the dull curette. It will not remove the tenacious secretions from the inflamed surface of the mucous membrane of the cervix and womb as quickly, as easily and as satisfactorily as the sharp curette in my hands. But to my subject. The germicide wash is continued, and if the disease is limited to the cervix, the cervical canal is further mopped out with an antiseptic solution. If it is of the body, the cavity is also washed out with a 1 to 3 or 4000 bichloride of mercury solution. An antiseptic stimulant is then applied to the cervical canal, and if need be to the whole uterine cavity. This can be done with a glass pipette or the uterine syringe. The stimulants which I am accustomed to use for this purpose are pure carbolic acid, and the saturated solution of the sulphate of zinc. Some others might do as well. Abont six or eight minims of the acid or the solution of zinc, can be carried to the internal os, or to the fundus of the womb and expressed. The further application of the stimulant can be spread all over the inflamed endometrium with a small cotton mop, being immersed in the antiseptic and carried with the uterine applicator into the cervical canal, and if need be into the cavity, mopping the parts. The germicide wash is again used to the vagina and cervix, and not into the uterine cavity this time. This completes the first dressing. The speculum is removed, a vaginal douche of warm water containing in solution a little sugar of lead, or sulphate of zinc, or carbolic acid, or bichloride of mercury, or golden seal or some other germicide, is ordered thrice daily, and she is requested to report back for treatment the fourth or fifth day.

If necessary the same treatment is made, though usually cleaning is all that is necessary. The application of carbolic acid or sulphate of zinc usually is not needed oftener than from two to a half dozen times during the course of treatment, about every eighth or twelfth day.

If I should find the cervix swollen and the cervical canal so closed that a curette could not be inserted,then in that event, under antiseptic precautions, a small uterine dilator is introduced until it passes through the internal os into the uterine cavity, and the cervical canal is gradually dilated. This sometimes has to be done under chloroform, ether or nitrous-oxide anesthesia. Though I scarcely ever use them for this purpose, preferring the hypodermic injection beneath the mucous membrane of the cervix a few minims of a 4 per cent solution of the hydrochlorate of cocaine, which gives local anesthesia, and my patients bear the operation very well. It sometimes happens that on account of the bend in the cervical canal the dilator cannot be placed. In that event I straighten the uterine canal with the uterine adjuster, when the dilator can be usually introduced, dilatation effected, and a needful gynecological dressing performed, that of cleansing and stimulating the asthenic parts, and effecting free drainage, thereby aiding nature, the doctor of all doctors, in repairing the damages.

Again, if the cervix has been unduly lacerated by giving birth or by obstetrical forceps, after the inflammation in the cervical canal has been allayed, the anterior and posterior lips of the cervix can be yoked with a strong silk ligature, the whole body of the uterus gradually and gently drawn down even within the vulva, when with the hawk-billed scissors, the deep angle of the laceration, and a good deal of the sides of the torn surface, can be vivified at one stroke, after which, by aid of the tenaculum forceps and the straight or curved scissors, all of the remaining cicatricial tissue can be removed. The parts thus vivified, after being washed with a good germicide, can be brought together and confined in juxtaposition by a few silk sutures, the cords removed from anterior and posterior lips, the womb replaced and the cervix dressed with a good quantity of a dry powder of iodoform and boracic acid. Over this may be placed a tampon of iodoformized aseptic cotton. This dressing left in sight for eight or ten days, the patient all the while in the recumbent position, the torn cervix will be found in nearly every case to be completely healed, and the stitches can be removed. Likewise, if the perineum be torn so much that the walls of the vagina protrude, and a procidentia is threatening, it should be repaired. No permanent good can be expected until these lacerations have been repaired. These operations can be done with cocaine anesthesia; but I prefer chloroform or ether for the operatian in repairing the torn perineum, and of these two anesthetics preference is given to chloroform.

Now let me somewhat review and mention a little different treatment, which is required in corporeal endo-

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metritis. The treatment is almost the same, a difference only being in the application.

Here we have a more obstinate disease, and requires more patience on the part of both patient and physician. What I have said in regard to cleanliness, antiseptics and free drainage, applies to the successful treatment of this affection. Though I would not wash out the womb with a stronger solution of the bichloride of mercury than 1 to 3 or 4000, unless it would be for a malignant disease. Nor would I wash the womb out unless I knew that the cervical canal was well open so that the wash could find an easy exit. There is some danger of the solution being forced into the fallopian tubes. The internal mouth of the womb is usually open or easily dilatable in this form of the disease. I like the action of Marchand's peroxide of hydrogen injected into the womb, when the cervical canal is well open, in all forms of inflammation of the endometrium, especially so before using the curette. The cavity of the womb being curvilinear from the fundus down to the internal os, that part can be easily curetted; but those angles at the mouth of the fallopian tubes are very difficult to curette. But this operation is very necessary in the treatment of chronic corporeal endometritis, and should be done as well as possible. The object should be obtained, getting rid of all broken down tissue, all granular or fungoid growths, all effete matter, and vivifying the whole endometrium should be further accomplished by free drainage, antiseptic stimulation and germicidal washes. In regard to the use of sulphate of zinc in the uterine cavity, unless the parts are well anesthetized considerable pain will be brought about, though the action of the zinc in bringing about a reaction in the adynamic parts is beautiful. Carbolic acid is preferred on account of its anesthetic effects. In a few minutes after its use the patient is usually easy. I have used the tincture of iodine alone and in combination, as Dr. Skene, of New York, uses it, with carbolic acid, one part of the carbolic acid to two parts of the tincture of iodine, but I rarely ever use iodine in the treatment of endometritis now. I believe it seals up the mouths of the Nabothian and utricular glands too much. The parts become too dry; free drainage is to some extent prevented, and the patient is longer getting well. The after treatment which I usually pursue is to wash out the womb with a 1 to 4000 bichloride of mercury solution every fourth or fifth day. The curette is used and the stimulant applied only when the healing process is considered too slow. After the uterus becomes tolerant of such gynecological dressings, the cavity may be washed out more often, sometimes daily, through a double recurring catheter in which, as would be better, the returning caliber is twice as large as the ingoing caliber. This washing should continue as long as the flow from the cavity of the womb should indicate that tissue is being broken down or exfoliated. If there is a misplacement, which has not been often the case in my experience, the uterus should be replaced and retained in place by cotton tampons, and position of patient in bed. After the parts become tolerant of such treatment, a well fitting Hodge's pessary will usually be borne with much comfort, and retain the uterus in place until the inflammation subsides, when the enlarged womb will have become less in size, the natural ligaments will have regained sufficient tonicity, and the womb will stay in place without such assistance. If the misplacement is complicated by adhesions which cannot with safety be broken loose, and the uterus cannot be replaced, a great deal of good can be accomplished by the gynecological treatment of which I have been speaking. If permanent drainage is effected the womb will empty itself. It can be easily cleaned. Inflammation will usually give way. Nature will become accustomed to the misplacement. The woman will be in a reasonably good condition, and ought to be happy.

Now, gentlemen, in conclusion, let me say that I could continue this paper and discuss the different treatments found in our text books, but I have detained you long enough. I hope I have said enough to bring the subject before you, that you may discuss these matters profitably to us all. I am certain that I have seen much good come from the treatment herein contained. My paper is before you for the good of suffering women and your kind consideration. Let me thank you for your kind and patient attention.

Abnormal Development of the Teeth, Forming Tumors of the Jaw.—Dr. O. Hildebrand, Gottingen (*Deutsch Ztschr. f. Chir.*), makes a further statement upon the case which he reported in 1889, in which the child of 12 years, who had been submitted to various operations, had been relieved of between 150 and 200 teeth of various sizes.

In July, 1891, patient had again presented itself at the Gottingen Surgical Clinic; both lower jaws were much thickened, as also the right upper jaw. On the whole there were found 17 teeth, part of them normally developed, others in an undeveloped condition; their position was deviated and irregular.

From the upper and lower jaw there were again some masses of teeth removed, which had the same configuration as those formerly described, and presented about 150 teeth; aside from this, there were found two round glassy bodies about the size of two peas, which upon microscopical investigation showed themselves to consist of tooth structure. The construction of teeth in this patient will continue, in all probability, until the soft tissues have all reached their final development, which will include the epitheleal structure of the teeth.

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EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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TO CONTRIBUTORS AND CORRESPONDENTS.

All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

All letters containing business communications or referring to the publication, subscription, or advertising department of this REVIEW, should be addressed to 914 Locust Street, St. Louis.

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The Pioneers of Antiseptic Midwifery.

Fifty years ago Oliver Wendell Holmes, recognizing the infectiousness of puerperal fever, formulated a prophylaxis which almost coincides with the views of modern authors. From time immemorial it has been the fate of those that had the moral courage to promulgate to the world new truths that had been dawning upon probably more than one intellect, to be reproached and even persecuted. Also, Oliver Wendell Holmes, then a young man, was not spared the obloquy and ridicule of his contemporaries. In a paper read before the Boston Society for Medical Improvement, February 13, 1843, and published by request of the Society in the *New England Journal of Medicine and Surgery*, April, 1843,the fiftieth anniversary of which publication was informally celebrated at the last meeting of the American Gynecological Society, he announced the following conclusions, based upon his experience in obstetrical practice:

1. A physician holding himself in readiness to attend cases of midwifery should never take any active part in the post-mortem examination of cases of puerperal fever.

2. If a physician is present at such autopsies, he should use thorough ablution, change every article of dress, and allow twenty-four hours or more to elapse before attending to any case of midwifery. It may be well to extend the same caution to cases of simple peritonitis.

3. Similar precautions should be taken after the autopsy or surgical treatment of cases of erysipelas, if the physician is obliged to unite such offices with his obstetrical duties, which is in the highest degree inexpedient.

4. On the occurrence of a single case of puerperal fever in his practice, the physician is bound to consider the next female he attends in labor, unless some weeks, at least, have elapsed, as in danger of being infected by him, and it is his duty to take every precaution to diminish her risk of disease and death.

5. If within a short period two cases of puerperal fever happen close to each other, in the practice of the same physician, the disease not existing or prevailing in the neighborhood, he would do wisely to relinquish his obstetrical practice for at least one month, and endeavor to free himself by every available means from any noxious influence he may carry about with him.

6. The occurrence of three or more closely connected cases, in the practice of one individual, no others existing in the neighborhood, and no other sufficient cause being alleged for the coincidence, is *prima facie* evidence that he is the vehicle of contagion.

7. It is the duty of the physician to take every precaution that the disease shall not be introduced by nurses or other assistants, by making proper inquiries concerning them, and giving timely warning of every suspected source of danger.

8. Whatever indulgence may be granted by those who have heretofore been the ignorant causes of so much misery, the time has come when the existence of a *private pestilence* in the sphere of a single physician should be looked upon not as a misfortune but a crime; and in the knowledge of such occurrences, the duties of the practitioner to his profession, should give way to his paramount obligations to society.

Five years after the publication of this paper, which has been re-published in the *Annals of Gynecology and Pediatry*, of June, 1893, Semmelweiss, of Vienna, observed that the wards to which students were admitted had a much larger mortality than those served exclusively by midwives, and this he attributed to infection from the dissecting room and the surgical wards. He then introduced the use of chlorine water and chloride of lime for washing the hands and thereby reduced the mortality to three per cent. His writings on the subject, however, showed up hospital administration in such a painful light that he was forced to relirquish his hospital appointment and retire into private life. He made a convert of Michelwitz, who, reading his works, came to the conclusion that he had been the means of infecting his own cousin, whom he had attended during her confinement. The discovery grieved him so much that he committed suicide (*Med. Times and Hospital Gaz*). In France Tarnier and Lucas Championniere were the first in introducing a reform in the management of confinement cases; the first by isolating cases of puerperal fever, and the second by introducing the system of antiseptic midwifery.

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Mississippi Valley Medical Association.

The nineteenth annual meeting of the Mississippi Valley Medical Association will be held in Indianapolis on Wednesday, Thursday and Friday, October 4, 5 and 6. A general session will be held each morning, and the afternoons will be devoted to section work. There will be three sections: One in General Medicine; one in Surgery, and one in Obstetrics and Gynecology.

The Convalescence from Fractures.

Dr. George W. King, of Helena, Montana, writes the New York *Medical Journal:* Authorities lay but little stress upon this important period in the treatment of fractures. The proper reduction and retention of the fragments of a broken bone is considered the principal thing to insist upon. The fear of shortening or angular deformity has no doubt been responsible for many imperfect recoveries. It has prompted too long continued immobilization with resulting loss of function that in many cases is never wholly regained.

We are told in detail how bones unite, how special fractures should be treated, the length of time required for union to take place, etc. If these were all the facts to be considered we might with propriety omit any further investigation of this subject. Unfortunately such is not the case, and we must continue our efforts to perfect the methods at hand.

The many conditions and influences that may hasten union of bone, such as age, location of fracture, ability of reduction and retention, general condition, and previous habits of the patient, are all well known and preclude the possibility of any definite rule for guidance as to the length of time immobilization should be employed. Each case must be left to the judgment of the attendant.

Many surgeons, doubtless the majority, are inclined to assume that their duties are ended upon the removal of the retention apparatus. This is certainly a dangerous practice and can not be recommended in any case. Numerous instances have occurree under my own observation where an excellent result has been compromised by want of care after removal of the splints and bandages.

The production of curves that nature never intended is neither creditable to the surgeon nor useful to the patient.

We can only avoid such unpleasant complications by familiarizing ourselves with the different stages in the the progress of recovery. No difference of opinion exists among surgeons as to the advisability of immobilization in all traumatic ruptures of bone. No exception is made in cases where there is no displacement at the time of injury. Common prudence suggests this course as a preventive measure, for no one can tell what harm movements of the patient or muscular contraction may do.

Practically, then, we have to deal with the effects of immobilization during the convalescence in every case of fracture. The number of cases presenting themselves to the surgeon to obtain relief by operation months, and even years, after the injury, is greater than physicians who do not undertake surgical cases are aware of—far greater, indeed, than it should be. Much better results are possible if we choose to adopt methods based upon a thorough knowledge of the processes involved in the healing of fractures.

The condition of a limb after being immobilized for several weeks in one of complete helplessness. The appearance is more or less characteristic, the whole limb shrunken, the muscles lax and without resistance, the skin smooth and glossy.

Muscular atrophy is nearly constant, though varying in degree; it is not limited to the injured part, but extends to the superior and inferior portions of the limb.

Recovery from this condition is very slow. Cases have been cited in which, some years after, there still existed a marked degree of difference in size between the healthy and injured limb. The pathology of muscular degeneration subsequent to fracture is not positively known. Whether compression and immobilization are alone responsible for it requires further proof.

A sufficient number of experiments upon healthy limbs ought to demonstrate how much is due to this cause I am not aware of any particular evidence in this connection, aside from that furnished by cases of fractured femus, in which both limbs are included in the immobilization apparatus. It is stated upon good authority that the atrophy is greatest in the injured limb.

Increased nutrition incident upon the formation of the callus is thought by some to impair the general nutrition of the limb. Observation and experience fail to sustain this theory. Contusion of nerve filaments, inducing neurisis, has been named as a cause. Whatever may be the true pathology, it is evident that disuse of a limb is an important factor in producing loss of function. We know that muscles deprived of their normal stimuli are poorly nourished, and degeneration of their fibers takes place.

Other changes to be mentioned relate to the venous circulation in the injured part; to these are due some of the disagreeable symptoms occurring at this time, notably the edema that usually persists for an indefinite time and becomes troublesome when the limb is pendent. To what is this abnormal condition of the circulation due?

Can we explain it by the vaso motor theory, or consider it purely mechanical? At the seat of injury there must necessarilly be extensive rupture of veins, which would naturally affect the return current through the part. Probably many of the smaller veins are obliterated, in some instances by pressure, in others by thrombi that effectually obstruct the vessels. In consequence of this mechanical interference, swelling occurs and persists until collateral circulation has become sufficiently established to empty the vessels. Perhaps the complication most to be dreaded in the secondary stage

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is that of stiffness of the joints in the vicinity of the fracture. Much of the disability in the early convalescence is due to this cause; the tendons no longer glide smoothly as in health, the limited amount of motion is painful in the extreme, and the joint, like a rusty hinge, is unfit for service until its freedom of motion is restored.

How shall we treat these conditions? It is not sufficient to simply tell the patient to use the limb, for,when he attempts to follow this advice, he is quickly made aware of its weakness. Every movement is painful,and he is for this reason more apt to desist from his efforts than to persevere, and is therefore too willing to trust to time to work a cure. We know such reasoning is fallacious, as we have seen; there must be a restoration of the circulation to nourish the part, the muscles must be stimulated to action, and the joints freed, before we can hope for any progress toward recovery. It is therefore a very unwise procedure to trust this important period to the patient himself. It is at this time we are able to do more toward restoring the normal functions than at any subsequent time. Experience teaches us that these cases are especially liable to become obstinate after several months have elapsed. There remains to consider what measures to adopt whereby we may avoid the many complications, or at least reduce them to a minimum. The indications are plain enough and have already been shown in referring to the effects of immobilization. From careful investigation, I am led to believe that massage promises the best results in the conditions named. By massage I do not mean the promiscuous rubbing usually indulged in. Neither the rough, clumsy manipulations that endanger the continuity of the partially formed callus, but the light, skillful touch of the "masseur" applied scientifically. Of course, it is unreasonable to suppose that physicians are ordinarily masters of this art, yet enough of the science ought to be acquired with but little trouble to carry out the treatment here advised. The advocates of the massage treatment of fractures without immobilization claim good results—equal if not superior to that obtained by the time honored custom by splints, extensions, etc.

They bring to their aid in proof of the correctness of their views examples furnished by the history of fractures among animals, where immobilization is impossible and yet union takes place. Admitting this to be true, I imagine few of us would care to take the risk of treating fractures without employing some retaining device until the danger of displacement is passed.

When shall we begin the use of massage?

At the very earliest moment that it can be done without causing the diiplacement. A judicious selection of a retention apparatus that will allow free access to the limb without removal of the entire dressing is an advantage, particularly at the beginning of treatment. My preference is for the plaster-of-Paris splint, for it can be readily opened and closed without deranging the fragments. By this plan we shall be able to not only combat successfully the degenerative changes in the muscles, but to keep the circulation in its proper course, thereby aiding the rapid absorption of excessive effusion that so frequently delays the normal process of healing. The same treatment applied to the joints keeps them pliable and ready for use when the time comes to resume their functions. With the nutrition of the limb provided for, the articulations guarded against abnormal conditions, we shall have done our part toward insuring results of which we need not be ashamed.

Functional Diarrhœa.

Dr. Stein points out the importance which has hitherto been attributed to catarrhal and inflammatory conditions of the intestine in producing diarrhea (*British Med. Journal*). In the stomach many disturbances, formerly supposed to depend upon a catarrhal condition of its mucous membrane, have now been found to rest on a functional basis, which is natural in view of Ewald's remark that the stomach does not really possess a mucous membrane. Analogy has led the author to a similar conclusion regarding the intestine, and he quotes, in support, the experiments and researches of Moreau and Rindfleisch, as also the statements of Cohnheim, that in patients who die of cholera the intestinal mucous membrane is not found to be in an inflammatory condidition, but only injested and vascular as during digestion, and that the "rice water" is only abundant normal secretion. Similarly, Cohnheim does not admit that infantile diarrhea is always accompanied by inflammation; and these and other circumstances lead the author to recognize the frequency of a purely functional diarrhea, attended by increased peristalsis, diminished absorption, and eventual increase of secretion, but without the presence of pus or blood in the stools. The diagnosis of this condition rests with the history and the exclusion of all circumstances which could lead to a catarrhal or inflammatory process. With regard to treatment, opium only acts by inhibiting peristalsis, and the only drug possessing a direct sedative effect on unstriped muscle is atropine, which paralyzes the nerve-endings and ganglia in the intestinal wall. This the author used successfully, administered as the extract of belladonna three or four times daily, supplemented by creosote or other antiseptic, to obviate the harmful fermentative changes. Great benefit is also derived from the use of galvanic, and especially faradic, currents of 3-10 milliamperes, as also from hydro-therapeutic measures and local warmth.

The Pathology of Laziness.

Many persons are unjustly compelled to bear the reproach of laziness, when their indisposition to exertion really has a physical basis, and depends upon some grave disturbance of nutrition. (*Food.*) Such cases deserve our sympathy, instead of the contempt which is unsparingly meted out to them by their more robust associates. Women, whose instincts are often remarka

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bly correct, understand this, and when a child is unusually quiet and prefers to sit still, instead of joining its companions in play, the mother's fears are aroused; she thinks at once that something is wrong, and that the child is going to be sick, or is actually suffering from some obscure internal disorder, possibly hip-joint or spinal disease. This explanation may apply in adults as well as in children. Some years ago, a clergyman, who had been very active in church work, was noticed to gradually give up one duty after another, and to show marked disinclination to perform any work requiring much exertion of body or mind. He was generally thought to be losing his interest and getting indolent. Indeed, he feared himself this was the case, and it gave him much mental distress and spiritual disquietude. He afterward came under the observation of a physician, who found that he was a sufferer from Bright's disease, from which he subsequently died. He was especially regretted by those who had hastily and ignorantly condemned him for what was assumed to be a fault, but which, in reality, was due to grave disturbance of nutrition from the approaches of an insidious organic disease. Victims of chronic malarial poisoning afford typical illustrations of laziness, although clearly suffering with bodily disorder. Who can estimate the amount of physical disability and apparent indolence which is directly due to dyspepsia and and chronic indigestion? Rheumatism and the muscular pains of lithemia, locomotor ataxia, and its nerve-counterfeits, incipient brain disease, and arterial degeneration, are all potent factors in producing indolent habits of body, while phthisis, pernicious anemia, and neurasthenia have physical weakness as a prominent and early symptom. A dislike for study in a child may often be traced to errors of refraction which are remediable by properly adjusted lenses.

Before pronouncing, therefore, a verdict of moral fault, and condemning those who are conspicuously deficient in energy, and whose powers of work are notably below the average, it would be well to stop and inquire whether they are not laboring under physical disability instead of indolence. In such cases it may be found that better results will be obtained by placing them under the charge of a physician than under an instructor in morals. The decision between the hospital and the work-house is often a difficult one to make for those wrecks of humanity, the physical degenerates, who became tramps because they have a moral and physical aversion to work. In a strictly analogous manner, in higher walks of life, when a physician prescribes physical exercise for patients who obviously require it, he often finds his instructions disobeyed simply because the physical disability of the patient is the real reason for his condition; for, if he had the power to follow the prescription, he would not need the advice. It appears, indeed, that, in certain instances, laziness may be a conservative effort of nature; and, as a symptom, will be estimated at its proper value by the intelligent physician.

Medical Journal Publishers Association.

THE MEDICAL PUBLISHERS ASSEMBLED AT THE WILLARD HOTEL, WASHINGTON, D. C., SEPT. 7.

The following Journals were represented:

Dr. J. C. Culbertson, "Lancet-Clinic," Cincinnati; Dr. F. King, New York "Polyclinic;" J. MacDonald, Jr., "International Journal of Surgery;" Dr. Landon B. Edwards, "Virginia Medical Monthly;" Dr. Fassett, St. Joseph, Mo. "Medical Herald" and "Medical Fortnightly;" Mr. Sommers, representing six journals published by George S. Davis, Detroit; Dr. Stowell, "National Medical Review;" Dr. J. C. LeGrande, "Alabama Medical and Surgical Age;" Dr. Bell of the New York Sanitarium; Dr. Martin, "Medical Era;" Dr. Fairchild, "New York Journal of Gynecology;" Miss C. Z. Murphy, "Woman's Medical Journal;" J. P. Morton & Co., "American Practitioner and News;" Henry Coe, "Pacific Medical Record;" M. N. Patrick, "Denver Medical Times;" H. W. Pierson, "Medical Advance;" J. H. Chambers, WEEKLY MEDICAL REVIEW and AMERICAN JOURNAL OF OPHTHALMOLOGY; J. Harrison White, "North American Practitioner" and "National Popular Review;" T. W. Hoyne, "The Medical Visitor;" Dr. C. B. Stemen, "Ft. Wayne Journal of Medical Science."

In addition to the above Publishers, letters were presented from the following who were unable to be present, promising their hearty support and co-operation:

Dr. C. A. Bryce, "American Doctor and Southern Clinic," Richmond, Va.; Messrs. G. P. Englehard & Co., "Medical Standard," Chicago; W. A Chatterton, "Medical Current," Chicago; C. E. Fisher, M.D., "Medical Century," Chicago; Dr. W. C. Wile, "New England Medical Monthly and Prescription;" Dr. H. Bert Ellis, "Southern California Practitioner;" Dr. C P. Wagar, "Toledo Medical and Surgical Reporter;" Dr. D. H. Howell, "Southern Medical Record;" Dr. M. B. Hutchins, "Atlanta Medical and Surgical Journal;" Dr. John Aulde, "American Therapist;" Dr. C. N. Miller, "California Medical Journal;" Dr. W. F. Bartlett, "Hahnemannian Monthly;" Dr. E. S. Elder, "Indiana Medical Journal;" Jas. H. Parkinson, "Occidental Medical Times;" Dr. A. R. Baker, "Cleveland Medical Gazette;" Dr. H. A. Mumaw, "National Medical Gazette;" Dr. Winslow Anderson, "Pacific Medical Journal;" Dr. Emory Lanphear, "Kansas City Medical Index;" Geo. W. Roberts, "North American Journal of Homeopathy;" Dr. F. E. Daniel, "Texas Medical Journal;" Dr. Finley Ellingwood, "Chicago Medical Times;" Messrs. A. L. Chatterton & Co., "American Homeopathist, and Journal of Electro-Therapeutics;" G. H. Shearer, "Medical News;" J. H. Shinn, University of Pennsylvania Press, five Journals.

Dr. J. C. Culbertson, Publisher "Lancet-Clinic" was chosen Chairman, and Mr. J. MacDonald, Jr. Publisher of the "International Journal of Surgery," secretary. The constitution and by-laws of the American Newspaper Union was presented by Dr. Frederick King and ordered changed so as to make it applicable for the pur-

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poses of this Association, and they were then adopted as their constitution and by-laws.

The meeting then adjourned to convene at the same place at 8.30 the following day to perfect the plans of this Association at which time Dr. J. C. Culbertson wielded the gavel. After the committee upon Rules to govern the Association made their report, officers for the ensuing year were nominated, of which the following were unanimously elected:

President—Dr. L. B. Edwards.

Vice-President—Dr. J. C. Culbertson.

Secretary—Dr. F. King.

Treasurer—Mr. J. MacDonald, Jr.

Also an Executive committee of five were elected.

The Association then adjourned to meet within six months subject to the call of the Executive committee, which committee at once organized and after considerable discussion as to the place for the next meeting, the eastern members desired that the meeting place should be either in Philadelphia or New York City, while the western members determined to have the meeting in the City of Medical Colleges, St. Louis; compromise however was reached and finally concluded to meet the first Monday in December in Cincinnati, at which time it is desired that all the Publishers of Medical Journals who contemplate allying themselves with such an Association shall be present, as we conclude from the rules submitted for the guidance of the Executive committee that there is a difference as to what action the Association will take governing discounts to advertising agents and others, or as to whether the appendage of a middle man is essential to the success of Medical Publishers, which will be determined at the meeting in Cincinnati.

Those desiring further information will address the secretary Dr. Frederick King, 218 East 34th Street, New York

Choledochostomy.—Terrier (*Rev. de Chir.*), after defining this operation as the permanent opening of the ductus choledochus, gives a critical and detailed study of the only four cases which have been operated upon. None of these were premeditated operations, nor was the true nature of the tumor diagnosed, except in one case, before the autopsy, and in this case the report is so meagre that it is impossible to determine the surgeon's reason for the establishment of the fistula, or the condition found present in the choledochus. The author concludes from the cases studied, that the enormous dilatation of the ductus choledochus appears to accompany frequently the infection of the biliary passages which complicates in all cases any operation and renders it very grave. As a consequence of the rarity of cases in which this operation is justified and in which it has been performed, it is impossible to formulate rules of procedure until other observations, with the results of intervention, have been published.

ABSTRACTS

Painful Micturition in Women.—In an admirable lecture upon this subject, Herman (*Provincial Medical Journal*), states that about one half the patients who consult a specialist for diseases of women complain of pain in passing water; but it is only the diseases which cause severe pain which require special treatment, so far as the urethra and bladder are concerned. All these cases of severe pain depend upon local diseases, which can only be discovered by direct examination. There are three places in which disease may exist occasioning this suffering—namely, the meatus urinarius, the urethra and the bladder. Pain in the meatus urinarius may be caused by urethral caruncle, by chronic congestion or suppurating cyst of the urethra, by abscess of the urethro vaginal septum, or by a tender, congested condition of the urethral mucous membrane. Chronic congestion of the urethra is chiefly seen in pregnant women; the urethra is swollen and tender and feels like a thick cord. Not only the act of micturition, but sexual intercourse may occasion almost unbearable suffering.

The treatment for this condition is complete rest, cold sponging of the part, cold hip-baths, the use of vaginal astringent injections, one or two leeches applied by a glass leech tube to the swollen and tender urethra, and gentle laxatives.

Chronic abscess of the urethra vaginal septum is rare and is characterized by a tense, hard, convex, bullous, very tender swelling between the urethra and vagina.

The treatment is evacuation. If there is a spot on the vaginal aspect of the swelling which is thin, and fluctuation is felt, the proper course would be to cut into this thin part. If there is no such spot the urethra should be dilated under an anesthetic until the canal will admit the finger, and the purulent collection can be evacuated through the urethra.

Suppurating cysts of the urethra form a pouch communicating with this mucous canal by a narrow, somewhat valvular, opening; urine gets into the pouch, decomposes, and inflames the sac. On examination, a round, tender swelling is found in the urethro-vaginal septum, varying in size from that of a pea to that of a hen's egg. By pressure there will be voided either urine or urine and pus, sebacious matter, or a calcareous deposit, depending upon the nature of the cyst. These cysts do not run the course of an abscess, which gradually close up once an opening has been made for the escape of pus, but they continue indefinitely in the same state, alternately filling with pus and urine, and being partially emptied by pressure.

The treatment is excision of the whole or greater part of the cyst-wall. This is best accomplished by first laying open the cyst freely from the vagina. What is next to be done depends upon the skill of the operator. The cyst wall should be dissected out and the raw sur-

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faces brought in contact by means of either cat-gut or shotted sutures. If a portion of the cyst near the opening is left and the rest is closed, the object of the operation will nevertheless probably be obtained, for if the pouch is obliterated there will be no place in which the urine can be retained and decomposed, and therefore no inflammation. If the operator mistrusts his manipulative skill, it may be enough simply to open the cyst freely from the vagina, and then, by keeping the vaginal opening from closing by packing with lint or gauze, retention of fiuid in the cyst will be prevented, the urethral opening may close, and then the cyst will be left with an opening only into the vagina. If no more urine gets into the cyst-cavity, inflammation will subside and no further symptoms will be exhibited.

If there be much inflammation of the cyst, of the urethra, or of the bladder, it may be well to make no attempt at closing the opening until such inflammation has been subdued by appropriate treatment. If the cyst is suppurative or not open, or the urethral opening of an inflamed diverticulum has become closed, the condition cannot be distinguished from an abscess. When the pus-cavity has been opened, its cystic character will be inferred from its definite smooth fibrous wall. An abscess has not a thick fibrous wall. The inside of a diverticulum may be trabeculated, so that the origin of the pus-cavity cannot always be surely made out from the feel of the interior. If the cavity be an abscess, it will guickly fill up; if it does not quickly become obliterated, it should be treated as a cyst. In some cases the patient will complain of severe burning, cutting pain at each act of micturition, but the meatus will be found to be healthy, nor on palpation through the vagina can any area of inflammation be felt. On urethroscopic examination of the mucous membrane it will be found a vivid red or deep purple, appearing in patches or involving the whole mucous surface. Passage of the catheter is extremely painful.

The treatment is to apply some alterative to the diseased mucous membrane; the best, in the author's opinion, is iodoform. The application is most conveniently made by putting into the urethra a bougie made of iodoform and cocoa butter. A little wool put between the labia will prevent the bougie from slipping out. In recent cases the use of three or four bougies will cure the patient. In cases of very long standing more prolonged treatment will be required. Nitrate of silver is also serviceable in this condition. In some cases application of nitric acid to the tender part is followed by relief. Dilatation of the urethra is also to be recommended. In some cases both the meatus and urethra are healthy, but on passing a bougie great pain is experienced as it enters the bladder. In these cases a urethroscopic examination will show either hyperemia or fissure of the vesical neck, the symptoms of extreme pain on micturition persisting afterwards; also great frequency, and difficulty in emptying the bladder. Sometimes a little blood escapes with the urine. The urine is clear, and there is tenderness about the vesical neck. Direct examination shows the fissure as a small grayish ulceration, with red, inflamed edges at the vesical neck.

The treatment consists in dilatation of the urethra under anesthesia; this is best accomplished by means of Hegar's dilators until the urethra admits the finger. Temporary benefit always follows this procedure, and sometimes permanent cure. The objections to this treatment are that there is danger of septic infection of the bladder and of permanent loss of control over the sphincter. Inconvenience rarely results unless dilatation is carried beyond the point necessary to admit the finger. In case dilatation is unsuccessful in relieving symptoms vaginal cystotomy is indicated. To perform this operation a director should be introduced into the urethra and held exactly in the middle line. Open the bladder from the vagina by cutting upon the director. If the incision is exactly median, no important part can be wounded. To prevent this opening from closing, Greenhalgh's India-rubber stem may be employed, or the vesical mucous membrane may be sewed to the vagina on each side by a catgut stitch. All pain ceases at once, and if the artificial fistula is kept open long enough, the ulcer heals, and then the fistula can be closed and the patient remains well.

To minimize the discomfort of the artificial incontinence resulting from this operation, the patient should be kept upon a fracture-bed. The rest in bed is of itself beneficial. If nothing is done to prevent the healing of such an incision of the bladder, it soon either heals or contracts to a canal only large enough to admit a probe. As to how long this fistula should be kept open no rule can be given. If as the fistula heals symptoms return, the artificial opening should be again enlarged.

Baker's method of treating these cases is to keep the patients in bed for only a few days, then to fit them with a urinal, and allow them to get up and enjoy fresh air and exercise. The fistula is kept open for months, and is not closed until the interior of the bladder has ceased to be tender and, in case of cystitis, until all trace of pus or blood has disappeared from the urine. This, however, sacrifices the advantages of rest, and it has the discomfort of constant soiling of the clothing.

Hearing Restored by Large Doses of Quinine.—J. S. Triplett, M.D., writes in the *Medical News*: The patient, a man of sixty two years, is very robust, and has always had very good health. About eight years ago he noticed that the hearing in his right ear was steadily growing less acute, until he finally became absolutely deaf in that ear; the hearing in the left ear remaining normal

Shortly after the deafness developed both lenses of the eyes became cataractous, the left maturing before the right. Two years ago, in September, the left lens was extracted. All went well until he "caught cold" in the eye, when severe opthalmitis set in. The pain was so severe that the opiate directed by his physician did not allay it. He told his physician to prescribe for him all the quinine he could stand. The

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quinine was put into large capsules, and he was directed to take one capsule every four hours; but instead of taking one he took three capsules every four hours. Cinchonism followed, and a "burning sensation" in the extremities, especially the lower, was experienced. The ocular inflammation subsided, but with loss of vision. With the subsidence of the inflammation hearing returned, and has been normal ever since. There was no discharge from either ear, nor was there tinnitus aurium in either. No cause could be assigned for the deafness. The man had never been troubled with catarrh of the naso-pharynx.

In the following March the remaining cataractous lens was extracted. No complication arose, and the man now has good vision in the eye.

It seems that in this case quinine simply reversed its usual modus operandi. I suppose there is no practitioner who has not seen deafness of varying degrees, temporary or permanent, caused by large doses of quinine.

It is known that quinine produces congestion of the peripheral sense-organs, and it is probable that the auditory organs were in such a peculiar condition that congestion brought about this happy result.

I think it also probable that, unnoticed, a slight discharge may have escaped during the height of the congestion. I do not know the quantity of quinine taken.

The Early Diagnosis of Chronic Nephritis.—For many years M. Dieulafoy (*Lancet*) has sought to emphasize the importance of divers symptoms which though often apparently trivial, are none the less significant of the existence of that very common malady, chronic nephritis. To these symptoms he has given the name of *petite uremie* or Brightism. He regards albuminuria as an unreliable symptom of chronic nephritis. Of sixty cases under treatment in his wards during recent years albuminuria was absent in one-fourth. That nephritis really existed was proved in several instances post-mortem. In another series of cases albumin disappeared in spite of the continued evolution of the disease. Some patients are albuminuric without being nephritic. Amongst the somptoms of nephritis M. Dieulafoy mentions auditory troubles. These consist in whistling or more sonorous noises in one or both ears, the causes being multiple (edema, paralysis of the acoustic nerve, variations in pressure). The frequency of these noises may be judged of when it is stated that they were present in thirty-four out of sixty cases. Meniere's vertigo was frequently complained of (thirteen times in sixty). Asphyxia of the extremities, first described by Maurice Raynaud, is one of the commonest symptoms of chronic nephritis. This begins as formication of the hands or fingers, and then the tips of the latter become bloodless, pale, and numb. This dead-finger symptom is found in all the forms and in all the stages of chronic nephritis. Itching, without possessing the same importance as the foregoing, is sometimes very severe. Frequency of micturition is well known as a symptom of the disease. To this symptom M. Dieulafoy has given the name of pollakiuria, to distinguish it from polyuria, many nephritics, in fact, urinating ten or twelve times a day without voiding a quantity above the normal. Cryesthesia (krivos=cold), or sensitiveness to cold, is a minor syptom of nephritis. It is generally confined to the lower extremities. Cramps, especially nocturnal, in the calves of the legs are sometimes severe enough to wake the patient. Epistaxis, chiefly occurring in the morning, is often significant. Electriform shocks must also be counted in this category. At the moment of falling asleep or during sleep the patient is aroused by a single violent shock, recalling the effects of an electric discharge. The temporal sign is frequent, here the temporal artery is distended, dilated, and tortuous without being atheramatous. This is, of course, due to high arterial tension. The foregoing symptoms, if associated in any one individual, are, according to M. Dieulafoy, sufficient to warrant the diagnosis of chronic nephritis. He is convinced that many persons apparently healthy are in reality nephritic. A confirmation of this diagnosis will frequently be found in the good effects of an exclusive milk diet, which causes the disappearance of these seemingly insignificant troubles. M. Dieulafoy has also applied another test—viz., the degree of toxicity of the urine passed by patients affected with chronic nephritis. He finds that this secretion has in such cases lost a portion of its toxic properties.

The Structure and Function of the Mammalian Heart.—As the result of a special research, Kent (*Journal of Physiology*) has found that whereas in the past it has been supposed that the mammalian heart differed from the heart of cold blooded animals, in having a complete break of muscular continuity between auricles and ventricles, it has now been shown that no such break exists, but that the auricles are connected with the ventricles both by strands of altered muscular tissue (especially well developed in the lower mammals) and by a more complex system of branching and anastomosing fibers, which penetrate the fibrous tissue between the two chambers (specially well developed in the higher mammals.) Muscular continuity being established, and a variety of observations upon the human heart, such as the study of the reversed beat, the time-relations of the reversed as compared with the direct beat, the time-relations of the beat in animals of different ages, the effects of compression of the auriculo-ventricular groove and the study of the beat in the dying heart, all tending toward the explanation of the transmission of the contraction from auricle to ventricle as a case of simple muscular conduction, the ideas that have been held as to the nervous nature of the transmitting apparatus become less necessary than up to the present time they have been. The results of observations upon the hearts of cold blooded animals, in which the connective muscular connection has long been known to exist, become to a certain extent applicable to the heart of the mammal, and many of the effects obtained by artificial inter-

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ference with the muscular structures existing at the groove in cold-blooded animals may be obtained with almost equal ease in the case of the mammal. The paasage of a contraction over the auricular wall also has been proved to occur independently of the larger nerves inasmuch as the contractian can pass over a zigzag strip of tissue made by a series of interdigitating incisions carried in any direction, and the free application of ammonia to all visible nerves does not arrest the con traction either in auricles or ventricles. The passage of the contraction over the cardiac tissue of the heart then appears to occur as a simple muscular wave, and the transmission of the contraction across the auriculo-ventricular groove appears to be of a similar nature.

Diabetes, with Diabetic Coma, in an Infant Eighteen Months Old.—Duffoco and Dauchez (*Revue de Medecine*) have reported the case of an infant eighteen months old, always well from birth, but for two weeks constipated, in consequence, it was thought, of the use of sterilized milk, of which immoderate quantities (five pints daily) were taken. Within this time the child had become ill tempered and depressed, and moaned at night. The urine was passed in excess. Notwithstanding its good appetite, the child had become greatly emaciated. The mother attributed the symptoms to difficnlt dentition, as two canines were about to make their appearance. There was no vomiting. The abdomen was distended with gas. The pulse was feeble, the face cyanotic. On the day after the first observation the child appeared to go into collapse, and became comatose. For the first time the possibility of diabetes suggested itself, but no urine could be obtained. The child could not be brought out of this condition, and death took place. Examination of a napkin that the child had worn disclosed the presence of a sticky powder, which upon solution and chemical analysis proved to be glucose. Two other cases of diabetes in infants under two years of age, in which death took place in coma, have been reported. In these also dentition was in progress. In another case diabetes developed, a few weeks after birth, in an infant that was nourished with corn-starch, a fatal termination ensuing. In one case, in an infant of seven months, diabetes developed four weeks after a fall from the nurse's arms. In some instances heredity seems to play a significant part. Among the symptoms noted in many of the cases was a change in character. Previously bright and good natured children became morose and ill-tempered. Constipation and abdominal distention were common. The frequency of micturition was increased, and increased quantities of urine were excreted. There were also thirst, pallor, and emaciation. In some cases coma develops suddenly, and some terminate fatally. In other cases death has resulted from asthenia, pulmonary gangrene, broncho-pneumonia, or generalized miliary tuberculosis. Recovery is exceptional, but has been observed. Finally, it is pointed out that the rapidity of course is suggestive of an infectious origin.

MEDICAL SOCIETIES

The Pan-American Medical Congress.—The business of the gathering was entered upon under the most favorable conditions of weather, attendance and public interest. The parquet of Albaugh's Opera House, where the Congress met, was well filled and the galleries also had an attentive audience, including many ladies, at 10 A.M., when Dr. William Pepper, of Philadelphia, took the chair. Many of the more prominent delegates took seats on the stage, but others occupied the body of the theater. There were probably between 800 and 1000 doctors in attendance.

Shortly after 10 A.M. President Cleveland passed from behind the scenes in front of the stage, escorted by Dr. Pepper, and was geeeted with hearty applause. The band played "Hail to the Chief," until the President took his seat. Then Dr. Pepper called upon Bishop Paret of Maryland, to invoke the blessing of Almighty God upon the Conference.

Bishop Paret, wearing his episcopal robes, came forward and the audience reverently rose. Opening his invocation with the Lord's prayer, he briefly implored divine blessing upon every effort for the advancement of sound medical learning and usefulness, and closed with the benediction.

Dr. Pepper then said: "It is in accordance with the deep interest taken by the Government of the United States in the organization and success of this Congress that our honored President has kindly come this morning, in the exercise of his function, to open formally the first Pan-American Medical Congress. I have the great honor of presenting President Cleveland"

PRESIDENT CLEVELAND'S ADDRESS.

At once stepping forward, and without waiting for the applause which greeted him to subside, the President, speaking without manuscript or notes, said:

"The part assigned me on this occasion admits of few words. It, however, affords me the opportunity to say how pleased I am to be in any way related to an assemblage such as this, called together in furtherance of the highest and noblest purposes and desires. I hope I may also be permitted to add that the protection of public health and the prevention of contagious disease are objects properly brought under consideration at the capital of a nation which appreciates fully the serious importance of everything which aids in making intercourse between civilized countries and commerce between them safe and easy. [Applause]. It is also fitting that those who devote themselves to saving human life and the alleviation of human sufferings, and consider the modes of reaching these beneficial aids, should meet at the seat of a Government whose greatest regard is the welfare and happiness of the individual citizen. [Applause]. It only remains for me to declare this Congress of the Pan-American Medical Society open for the

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transaction of the business which has called it together.

President Cleveland then resumed his seat amidst applause.

After being welcomed to the city by District Commissioner Ross President Pepper, in an informal manner, described the purpose of the Congress, and the ends which it hoped to obtain, and outlined the programme of the meeting. Dr. Pepper said in the future it might be that the Pan-American Medical Congress and the American Medical Association would become one and the same organization. This sentiment was received with applause.

Dr. John C. Phillipo, of Jamacia, President of the Legislative Assembly, responded to the address of welcome.

Representative J. B. McCreary, of Kentucky, Chairman of the Committee on Foreign Relations, was introduced and told of the unanimity with which the Congress seconded the efforts of physicians of the United States to secure the first Pan American Medical Congress in Washington. He expressed the hope that many other Congresses might follow, and pledged his efforts to secure whatever legislation might be necessary to bring that about.

Dr. F. Montiseambert, Chief of the Canadian Quarantine service on the St. Lawrence River, was the next speaker. He recounted the history of the work of which he is in charge, which began in 1884, resulting in great good to the people, not only of Canada, but of the United States.

Additional brief addresses were made by Dr. Juan J. Ulloa, of Costa Rica, and Dr. J. F. Hibbard, of Richmond, Ind., President of the American Medical Association.

Secretary General Dr. C. A. L. Reed made a verbal report recounting the preliminary work done by him. Every medical society on the American Continent, from Hudson's Bay to the Strait of Magellan, including a membership of 100,000, had been communicated with.

GENERAL ADDRESS OF THE DAY.

The General address of the day was delivered by Prof. Francisco A. Risquez, of Caracas, Venezuela, on "American Plants and Their Derivative Drug Products." It was quite technical, but finished with a splendid plea for an international study of drug action, and a unification of system concerning their action and doses.

This Congress ought to be called the International Congress of Hygiene, National Quarantine and Education; such are the subjects to be discussed for the next four days.

By far the most important work to day was done at the meeting held in the Grand Army Hall, Dr. A. L. Ghion, Medical Director of the United States Navy, in the chair. The subject attracting the most attention was the establishment of national scientific control of public health, as will be seen below:

Dr. Ghion himself read the first paper, dealing chiefly with the necessities of hygiene. "Why," he said, "should war be represented by a minister to control large armies when the little microbe has no officer empowered to look after his extermination? Forty years ago sanitary science in the navy was ignored. The army and navy are beginning now to pay great attention to hygiene, but civil authorities as yet disregard all such rules and principles. Is cholera declared in a place then at last attempts are made to stamp it out. Why lock the door after the horse is stolen? No, use sanitary science to prevent disease, not merely to cure it. The section must declare its opinion firmly that Government support is needed. Public health is of national importance, and not till the nation authorizes as powerful official interference as the army and navy now exercises will public health be properly cared for."

ADDRESS OF THE EXECUTIVE PRESIDENT, SECTION OF GENERAL SURGERY.

John B. Hamilton, M.D., L.L.D., of Chicago, delivered the following:

COLLEAGUES.—For the first time in the history of the American continent, the medical men of the Americas meet in convention, for the purposes of scientific advancement and the cultivation of closer professional relationship.

The country of Washington, the land of Bolivar, and the sunny islands of the southern seas, have sent their representatives to this capital of their oldest republic, to exchange courtesies, and set forth a fair statement of their degree of enlightenment in the various branches of medical knowledge.

Our statesman have long desired this close union between the American republics, and the medical profession, now as ever, stand ready as citizens to carry out their share of this patriotic duty. After our own civil war, the medical profession, the American Medical Association, met in Annual reunion at Atlanta; and it should always be a matter of professional pride that our own led the van in this march of professional and social reunion. Here again we are inaugurating the first of what we hope may be the beginning of a series of Pan-American professional congresses, each more interesting than its predecessor, and all serving to unite our glorious lands, in common aims and mutual regards.

As the United States has had the honor of proposing the Congress, the burden of organization has fallen largely upon its representatives, and the overflowing program is to-day evidence of the faithfulness with which our President, our Secretary-General and their coadjutors have performed their task.

We welcome you, dear colleagues, to a rare treat in the republic of letters; our foremost medical men will address you, and the topics they bring for your consideration have living interest, for they are topics of to-day.

A glance at our program shows that our own Section, notwithstanding the subdivisions by which many branches of surgery have been organized into separate

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Sections, is ample to fully occupy the time set apart for our deliberations.

The rapid evolution of surgical knowledge is one of the wonders of this remarkable age, and surgeons may fairly claim that their own branch of medicine has kept equal pace with the stupendous advance made by the collateral sciences. A review of the surgical progress of the last decade, alone constitutes one of the most brilliant pages of the history of medicine. And yet one must remember that all scientific progress is based on antecedent fundamental facts, discovered by slow, laborious and painful steps.

The labors of Darwin, Huxley, Herbert Spencer, Pasteur and Lister, in the last decade, have made possible the practical successes in the present decade.

There is at this time no diseased organ or tissue of the body that escapes the remedial scalpel, and an examination of the discussions of this time shows that the questions presented are rather those of method,than those of original discovery. We no longer question the propriety of surgical interference, in hitherto dark portions of human anatomy, but we are concerned in the technique of that interference; and to the improvement of surgical technique the ablest minds of the present decade have been directed.

The subject of surgical bacteriology, which includes the chemical study of microbic products, has still much to disclose, but we already base our practice on the immortal discovery of Pasteur. The success of modern surgical treatment, even with the imperfect knowledge of the bacteria that we now possess, is such that no surgeon thinks for a moment of comparing the results of any given operation with those obtained in the pre-microbic epoch. This comparison, however, only relates to the age of gunpowder, for history tells us with abundant detail, that the ancient treatment of wounds correspond very closely with our own. The vulnerary compounds of the ancients were largely composed of what we know as antiseptics; the teribinthinate and metallic dressings of the Alexandrian period we can accept to-day as true anti bacillary agents; and even the boiling oil and the red hot iron, we could now admit as forming an eschar, or impermeable wall against the entrance of microbes. It was aseptic surgery of which the ancients knew nothing. The empirical results of the boiling oil, of the actual cautery, were enough for the ancient masters; like the heroes of Balaklava:

"Theirs not to reason why;"

they only knew results were satisfactory, wounds healed quickly and without sepsis; what matter if the theory on which their treatment was based—that of arrest of hemorrhage—was faulty, the result satisfied them. Like the blind man of the New Testament the logic was simple: "Whereas I *was* blind, *now* I see;" therefore the touch was adequate. All medical science seems to have run in cycles, and there was less medical superstition in the Alexandrian period, than in medieval medicine—less in the Hindoo charaka than in the pages of Guy de Chauliac or Ambroise Pare Bacteriology has added much to our knowledge of tuberculosis, and given more precision to its treatment, but that knowledge is still imperfect, and its treatment far from satisfactory. Much less has bacteriology added to our knowledge of the carcinomata, which still remain one of the mysteries of medicine. We have for years studied the varying departures of tissues from the normal to the abnormal type, and bacteriologists have in vain sought to connect the atypical structure of carcinoma with some bacterial development, but no Pasteur or Harvey has yet dawned upon our horizon to pich the lock of a mystery to which Heaven seems to have allowed our generation no key. Looking to the future we can not doubt that the solution of the formation of the carcinomata will yet be discovered, but it will necessarily be through the influence of some now totally unknown factor. The study of embryology and atavism seems at present the most probable avenue to the truth.

What may we hope for the future of surgery?

It seems likely at this day that improvements in technique will continue to occupy the surgical mind until some epoch making discovery in physiology shall have been made. It is not likely that the present generation of surgeons will witness another discovery as far reaching as that of Pasteur. We must digest and fully assimilate the discoveries of the bacteriological epoch; that process will probably fully occupy our time and that of our immediate successors. It is true that we may have some help from advances in the collateral sciences; transillumination of the body, for example, may be yet fully developed in our time, instruments of precision as aids to hearing and vision may greatly assist us in making our present knowledge useful, but the great outlets to human life such as carcinoma, in all probability will have their genesis understood only by the surgeons yet unborn. When that time shall come, carcinoma and tuberculosis will be classed among the preventable diseases. These two affections have cost mose human lives annually than cholera or yellow fever, and yet no government has ever set on foot any systematic and regular inquiry into their causation or propagation. It is true that the study of cattle tuberculosis has been the subject of much study by the Bureau of Animal Industry, but so far as the human race is concerned little has been done in the direction indicated.

Colleagues! I feel that I have two long detained you with these speculations, when we have before us a program so rich and so varied, but I cannot refrain from expressing by heartfelt congratulations on the success of this meeting, my thanks for your generous response to the call for papers, and as an American surgeon to bid you welcome. Welcome, thrice welcome, foreign colleagues, to our hearts and homes. We pray you to kindly join us in warmest fraternal greetings to our European guests, and let us remember the saying of Livy that true friendships are immortal.

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American Neurological Association.—The nineteenth annual meeting of this association was held at Long Branch, N. J., July 25, 26, and 27, 1863. We are indebted to the *Medical News* for this report:

[CONCLUDED].

Dr. C. L. Dana, of New York, read a paper entitled

AKROMEGALY, GIGANTISM, AND FACIAL HEMIHYPERTROPHY.

He related the history of a case of akromegaly with autopsy, and that of a case of gigantism or somatomegaly with some symptoms of akromegaly. The giant had a unilateral facial hypertrophy. The first case was in a full-blooded Bolivian Indian who was exhibited as a giant. He was thirty years old, 6 feet 7 inches high, and weighed 300 pounds. The malar and frontal bones were enormously developed. The thorax measured 50 inches in circumference. Death took place suddenly. On autopsy, the brain was found normal, weighing 55 ounces. The pituitary gland was greatly enlarged, measuring 1 inch in diameter. The thyroid gland weighed 4 ounces. The feet and hands had increased in circumferential measurements. The brain presented interesting peculiarities of fissuration.

The second case was in a professional giant, nineteen years old, 7 feet 5 inches tall, and weighing 350 pounds, whose muscular development was feeble and who presented several symptoms resembling those of akromegaly. A most curious condition was a progressive unilateral facial hypertrophy, due mainly to osseous growth. It suggested akromegaly attacking only half of one extremity. Only eleven cases of this affection are on record.

Dr. Dana said that akromegaly is sometimes associated with gigantism. He held that many so-called giants are instances of pathologic growth rather than excessive physiologic development.

There is much evidence to show that the pituitary gland has some relation to these disorders. Among twelve autopsies, this gland was enlarged in ten.

Dr. Dercum said that akromegaly is not associated with increase in the length of bones but in their width. He regarded Dr. Dana's case as one of gigantism with akromegaly superadded.

Dr. Gray said that it is a question whether akromegaly and gigantism are not identical. The pathology of akromegaly is not yet clear.

Dr. Collins held that akromegaly and gigantism are two separate diseases. In gantism the changes are in the cellular structure of the diaphyses and epiphyses, principally the former In akromegaly the changes are confined to the epiphyses. Probably the disease of the pituitary gland stands in a causative relation to akromegaly. Giants may suffer from akromegaly, which is a degenerative disease.

Dr. Putnam said that he has seen temporary improvement in one case from the administration of thyroid extract.

Dr. Sachs expressed the opinion that akromegaly and gigantism are related. Gigantism is a form of physiologic excess, while akromegaly is a distinct morbid condition.

Dr. Weber, of New York, had seen two cases. One had symptoms of myxedema. He was inclined to believe gigantism to be excessive physiologic growth.

Dr. Mills related that he has, after death, found a tumor destroying the pituary gland in a case in which during life there has been no akromegaly.

Dr. J. J. Putnam, of Boston, read a paper entitled

THYROIDECTOMY IN THE TREATMENT OF GRAVES' DISEASE.

After calling attention to the fact that this procedure has been carried out some forty times, mainly by German surgeons, with but two deaths and a very large percentage of cures or improvements, he narrated the case of a young woman suffering from a typical form of Graves' disease, of nine months' standing and with a rather large goiter. The right lobe and most of the isthmus were removed. During and after the operation the patient's pulse ran up very high, and for several days she lay in an extremely prostrated, and apparently critical condition. She then rallied, and at the end of six months her condition was decidedly better than before the operation, though far from being cured. The remaining portion of the tumor did not shrink and showed a marked tendency to vascular enlargement. The voice was reduced to a whisper immediately after the operation, but subsequently nearly recovered its natural tone.

The reasonableness of the operation lies in the fact that in Graves' disease certain nervous centers are in a state of extreme irritability. Any means that will cut off a considerable number of excitations from reaching the unstable centers is likely to be beneficial by securing for them a partial physiologic rest. There are various means, such as complete rest, the treatment of the nasopharynx, etc., that may do this in a measure, but no one means is so effectual as thyroidectomy. The operation is, however, attended with a slight risk of death, and with a greater risk of considerable temporary prostration and laryngeal paresis.

Dr. Weber said that he has noted recovery in a patient possessing all of the characteristic symptoms, under the persistent use of potassium iodid. The dose was gradually increased to three drams daily.

Dr. B. Sachs, of New York, read a paper entitled

TABES AND SYPHILIS.

In support of the close relationship between syphilis and tabes he pointed out the frequent occurrence of general paresis in association with tabes, and of tabes in the course of general paresis; the occurrence of symptoms in the course of tabes that are often due to syphilis; the ocular palsies; the loss of pupillary reflexes and even the lightning-pains; the effect of treatment with mercurials and iodids upon many of the symptoms of tabes.

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A clinical differentiation of cases of tabes which are due to an active syphilitic process was attempted. Among such cases were included those that exhibit complete loss of reflex contractility of one or both pupils, and ocular palsies. A case of typical tabes was reported *in extenso*, in which on post-mortem examination a more recent syphilitic process was found superimposed upon an old typical sclerosis. It was pointed out that the spinal sclerosis may result from degeneration brought about by syphilitic disease of the blood-vessels of the cord. Altered states of the blood may be the prime cause of changes in the bloodvessels.

Dr. Preston maintained that the syphilitic process is an arterio-sclerosis. Rarely is there hyperplasia of neuroglia without changes in the cells or nerve-fibers. The tabetic process probably begins in the bloodvessels. Traumatism seems to be an important etiologic factor. Improvement and relief of pain have followed the use of nitro glycerin.

Dr. Mills stated that preceding the development of the sclerosis there may be leptomeningitis and disease of the vessels, which if attacked early might be relieved or removed, but the sclerosis once established, recovery becomes impossible. Posterior sclerosis often advances at intervals by jumps, and these may sometimes be coincident with or may follow the revival of active syphilitic processes.

Dr. Parsons referred to two cases of syphilis, followed by insanity and the subsequent development of spinal symptoms.

Dr. Seguin stated that he still adheres to the idea that syphilis is only a predisposing cause for the groundwork of tabes. Certain cases occur that are undoubtedly free from any history or evidence of syphilis.

Dr. Knapp mentioned a case of primary syphilis superadded to tabes of two or three year's standing.

Dr. Wm. C. Krauss, of Buffalo, exhibited a new pedodynamometer. The apparatus consisted of a wide, heavy belt, with its inner surface padded, so that its adjustment around the waist will not be uncomfortable. A heavy webbing is looped through the belt, passing over the shoulders and helping to retain the belt in position. A common dynamometer is connected with the belt by means of a strong adjustable strap, permitting it to be lengthened or shortened, according to the stature of the patient. Connected with the dynamometer is a stirrup, the base of which is padded for receiving the foot. Pressure exerted upon the stirrup will be registered upon the dial of the dynamometer and the exact strength of the extensors of the leg can thus be ascertained. The apparatus can be applied either in the standing or in the recumbent posture. The leg should be flexed at the knee at an angle of about 90°. To determine the strength of the calf-muscles the strap should be lengthened and the foot flexed upon the leg.

Dr. C. L. Walton, of Boston, read a paper entitled

TUMOR OF THE ANGULAR GYRUS,

in which he detailed the history of a case presenting temporal and occipital headache, vomiting, paralysis of the left abducens, double optic neuritis, hemianopsia, word-blindness, aphasia, and word deafness. An operation was attempted, but the tumor proved too large and diffuse for removal, extending into the temporal, occipital, and parietal regions. The patient lived two months, with comparative relief from pressure symptoms, including the abducens paralysis. Toward the end the right hand and arm became somewhat paretic. Examination showed the growth to be a glioma.

Dr. Seguin suggested that the ocular symptoms were probably not due so much to lesion of the angular gyrus as to involvement of the fibers of the fasciculus opticus which lie immediately under it.

Dr. James H. Lloyd and Dr. David Riesman, of Philadelphia, presented a joint communication entitled

INFECTIOUS ENDOCARDITIS WITH GENERAL SEPTICEMIA, COMPLICATED WITH MULTIPLE NEURITIS,

founded upon the report of two cases.

The first occurred in a man with a typhoid type of fever which had continued for three months, and was complicated with multiple neuritis. The diagnosis of typhoid fever was excluded. The neuritis was irregularly distributed. The patient gradually developed an aortic regurgitant murmur, with a water-hammer pulse. Later, a purpuric eruption appeared. A diagnosis was made of infectious endocarditis, with secondary septic neuritis. At the post-mortem examination immense vegetations were found on the aortic valves, with infarcts in the spleen and in one kidney. Sections of the spinal cord and nerves were shown, exhibiting slight posterior sclerosis of the cord and extensive inflammation of the nerves.

The second case, also in a man, simulated typhoid fever, with yellow-colored stools. At the post-mortem examination multiple abscesses in the brain, a large embolus in the left brachial artery, and an infarct in one kidney were found, together with a giant growth of vegetations as large as a pullet's egg attached to the inner coat of the aorta, overhanging the orifices of the innominate, carotid, and subclavian arteries.

Dr. E. D. Fisher, of New York, read a paper entitled

CONGENITAL CEREBRAL HEMIPLEGIA, WITH AUTOPSY.

He detailed the history of a case presenting complete right hemiplegia, with marked atrophy, exaggerated reflexes, epilepsy, and imbecility. The cranial measurements showed morbid deficiency in the binauricular diameter and facial length. At the autopsy the left central hemisphere was found much atrophied. The right cerebellar hemisphere was also atrophied. The microscopic specimens showed a decrease in the number of cortical cells, but those present were not much diminished in size. There was some loss of acuteness of the angles of the cells, but little pigmentary or granular changes. The cord was but slightly affected.

Dr. Charles K. Mills, of Philadelphia, read a paper entitled

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LESION OF THE THALAMUS AND INTERNAL CAPSULE.

The patient had an apoplectic attack in 1877, and died in 1892. The symptomatology of the case included hemianesthesia; paresis with contractures not marked; inability to recognize the position of the affected limbs.

Hemianopsia and all affections of the special senses were absent, as were also athetoid and choreoid movements. The autopsy disclosed a hemorrhagic cyst, which had destroyed about two-thirds of the substance of the thalamus, including the entire external tubercle and a large portion of the pulvinar. The anterior extremity and the internal and inferior surfaces of the thalamus were intact. The lesion had to a slight extent invaded the posterior arm of the capsule.

Dr. Wharton Sinkler, of Philadelphia, read a paper entitled

TUMOR OF THE OPTIC THALAMUS,

and presented a specimen. He reported the case of an unmarried woman, forty-six years old, who, previously in excellent health, first noticed somnolence and loss of mental vigor. Her manner became indifferent and listless A little later there was some aphasia, and later still paresis of the right side of the face, unsteadiness of gait, and awkwardness in the use of the right hand. When first seen there was marked paralysis and partial anesthesia of the right side of the face, but no impairment of sensation of the arm or leg. There was decided mental hebetude, but no loss of memory. The woman could not walk on account of unsteadiness. The knee jerks were exaggerated. The temperature was subnormal and the pulse varied from 48 to 60. The pupils reacted to light and in accommodation. There was no nystagnus or hemianopsia, and no change in the fundus oculi.

The symptoms increased in severity, the temperature rose rapidly, and the patient died. There had been no convulsions.

The post-mortem showed the left optic thalamus to be the seat of a growth as large as a hen's egg, which encroached upon the corpus striatum and posterior part of the internal capsule. The tumor has not been examined microscopically, but is probably a fibroma.

The points of interest are the hysterical symptoms that were present at the onset; the fact that the anesthesia was confined to the face; and the question that arose as to the possibility of operation.

Dr. Dana referred to two cases, one with tumor and another with softening in the thalamic region, in both of which somnolence was a prominent symptom. This phenomenon is characteristic when the posterior portion of the optic thalamus and the neighborhood of the corpora quadrigemina are involved.

Dr. Seguin reported a case with a probable tumor in the thalamic region, with somnolence, which was increased by the use of potassium iodid,

Dr. Dana said that he is familiar with a case in which the iodid acted as a hypnotic.

Dr. Gray said that he has noticed the iodid to produce somnolence in a case of cerebro-spinal meningitis.

Dr. Sinkler added that in his case the somnolence diminished after the administration of the iodid,

Dr. George J. Preston, of Baltimore, read a paper entitled

THE LOCALIZING VALUE OF APHASIA.

He related two cases of hemianopsia, one with autopsy, in which there was no word-blindness, as might have been expected. A case of mixed aphasia was related and the brain exhibited. The case showed absolute motor aphasia, together with word-blindness, and yet the lesion was confined to the third frontal convolution, the occipital cortex showing no disease. A case was reported in which there was a general disturbance of speech, with distinct mental symptoms; the patient at times being maniacal. Upon the strength of the general disturbance of the speech processes the skull was trephined over Broca's region, and the under surface of the dura found covered with blood.

Dr. Leonard Weber, of New York, presented a paper entitled

SPINAL NEURASTHENIA.

He objected to any single plan of treatment as too much routine, and not likely to be of permanent service to the patient, while a proper combination of well-known methods based upon careful individualization is likely to be of greater benefit.

In the grave forms of neurasthenia caused by mental and physical overwork, the prognosis thus far has not been good, even as to relative recovery. If the reports can be trusted, it would seem that hypnotic suggestion constitutes a remedy of extraordinary power in some of these cases.

The history was related of some cases of severe neurasthenia brought about by protracted mercurial inunction, and another caused by prolonged daily use of small doses of Carlsbad salts. Both recovered at the end of about a aear.

Dr. Wm. C. Krause, of Buffalo, read a paper entitled

OBSERVATIONS IN A CASE OF MYXEDEMA.

He reported a case of myxedema in a woman, fifty-three years old, whose mother was afflicted with symptoms similar to the patient's. The patient had always been in good health up to her forty-sixth year, although she had never perspired, and the secretions, as the saliva, nasal mucus, and the milk, were always scanty. Following upon an accident, her face, body, and extremities became swollen, her hair suddenly disappeared from all parts of the body, and she suffered with severe pains, especially through the temples, and a tired feeling incapacitating her for all kinds of manual labor. She further complained of a feeling of coldness, even in midsummer. Her hands were dry, harsh, and scaly, her face waxy, and her eyes puffy and swollen. Her temperature ranged from 95.4° F. to 97.4° F. Her pulse, soft, regular, and uniform, varied from 81 to 88 per minute. The edema-like swelling did not pit on

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pressure. The urine was normal and did not contain albumin at any time. The only drug that acted beneficially was ferric chlorid.

Thyroid glands of sheep were given for six weeks, but no improvement whatever appeared to follow. Another case, seen in consultation, treated with desiccated thyroids, also manifested no improvement.

Dr. Philip Coombs Knapp, of Boston, read a paper entitled

SIMULATION IN TRAUMATIC NERVOUS DISEASES.

He said that although many persons will simulate disease if it be to their advantage, successful simulation of the various traumatic nervous affections is rare.

Non-traumatic hysteria and neurasthenia present many symptoms that appear counterfeit, the victims of these diseases often being accused of pretending to be ill, when really the malady is a serious one.

Contraction of the visual field, anesthesia, tremor, disturbances of the reflexes, circulatory disturbances, and Mannkopf's symptoms are to be regarded as important objective signs. Few simulators have intelligence enough to withstand a searching examination by a skilled neurologist.

Furthermore, a person can keep his attention fixed on any subject only for a very brief time, and if he must be prepared to defend his simulation of half a dozen different symptoms he will inevitably be tripped up by unexpected tests applied when his attention is diverted.

Three cases were cited in which the defence claimed that there was simulation, but in every case objective evidence proved the reality of the disease.

Of fifty cases in which claims for damages had been made, only two could be regarded as simulating, and few as exaggerating, and in most of these there was little reason to suspect any deliberate attempt at fraud.

Dr. Mills maintained that absolute simulation is very infrequent. The cumulative exaggeration of symptoms however, is comparatively frequent. A few persons can simulate a type of insanity or a traumatic neurosis, but cannot easily simulate all of the symptoms and signs.

Dr. Gray said that many cases supposed to be simulating are simply offering to the trained eye symptoms indicative of possible simulation. He related a case of traumatic neurasthenia cured by $^1/_{125}$ grain of atropine taken for two days.

Dr. Lloyd held that the symptoms of traumatic neurasthenia are nothing but the inter-paroxysmal symptoms of hysteria. Because a person develops hysteria after an accident there is no reason to believe that he must be a simulator.

Dr. Seguin exhibited a specimen stained with a 1 to 2000 solution of nigrosin, a method that he used many years ago, but neglected to publish. One of the advantages is that specimens may be safely left in the solution for twenty-four hours.

Dr. C. L. Dana, of New York, read a paper entitled

THE MICROBIC ORIGIN OF CHOREA, WITH A CASE.

He reported the case of a man, twenty-six years old, who had had chorea from the age of fifteen, the attacks appearing exactly like those of ordinary chorea. At first there were intermissions, but the disease finally became chronic. The spasmodic movements were general and violent. There was no heart-disease or rheumatism.

The patient died from exhaustion. The post mortem examination showed microscopically a conspicuous chronic lepto-meningitis involving the vertex of the brain. Microscopically this was found to be mainly a proliferation process, without exudation or much cell-infiltration In the superficial layer of the cortex there were cellular infiltration and degenerative changes. At this point diplococci were found. The microorganisms were found only in the deep layer of the pia and the superficial part of the cortex.

In addition, there were found peculiar hyaline bodies in the three outer layers of the cortex and less numerously in the basal ganglia. There were evidences of meningeal irritation, vascular disease (arteritis), and nerve-root irritation in the medulla and upper part of the cord. The lower part of the cord was not examined.

The following named gentlemen were elected to active membership: Dr. Brower, of Chicago; Dr. Burr, of Philadelphia; and Dr. Diller, of Pittsburg. Dr. Arnold Pick, of Prague, was elected an associate member.

The following papers were read by title: "The Genesis of Hallucination, Illusion, and Delusion," by Dr. H. A. Tomlinson, of St. Peter, Minn. "The Diagnosis of General Paresis," by Dr. L. C. Gray, of New York. "A Report of Two Cases of Friedreich's Disease," by Dr. Frank R. Fry, of St. Louis. "The Metapore or Foramen of Magendie in Man and in the Orang," by Dr. Burt G. Wilder, of Ithaca. "Observations on the Relation of Chorea to Rheumatism," by Dr. Eugene Riggs, of St. Paul. "Experiences in the Use of Testiculin and Cerebrin," by Dr. J. J. Putnam, of Boston. "Peripheral Paralysis after Surgical Operations," by Dr. V. P. Gibney, of New York. "Traumatic Brachial Plexus Paralysis in Infants," by Dr. Wm. M. Leszynsky, of New York.

The officers elected for the ensuing year were:

President—Dr. B. Sachs, of New York.

Vice-Presidents—Dr. F. X. Dercum, of Philadelphia, and Dr. P. C. Knapp, of Boston.

Secretary and Treasurer—Dr. G. M. Hammond, of New York.

Councillors, Dr. E. C. Seguin, of New York, and Dr. J. H. Lloyd, of Philadelphia.

Illumination of the Eyes from Behind.—When an incandescent lamp is introduced into the mouth for the purpose of ascertaining, by trans-illumination, the condition of the maxillary antra, the pupils are seen as blood red apertures. Mr. N. Stevenson calls attention to the curious fact that when the light is thus introduced, as it were, by a back door, the pupils do not contract (*Med. Press*). This observation may prove to possess considerable importance.

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NOTES AND ITEMS

An Injustice to the Officers of the Marine Hospital Service.—The announcement of the death from yellow fever, of Assistant Surgeon J. W. Branham of the Marine-Hospital Service, who was recently ordered from duty at this port to assume command of the quarantine service at Brunswick, Ga., where there was a slight local outbreck of that fever, adds another name to the roll of honer of officers that have died of disease incurred in the line of duty.

The officers of the Marine-Hospital Service that have died of yellow fever acquired at their stations were Assistant Surgeon Roswell Waldo, at Cairo, on October 18, 1878; Assistant Surgeon W. C. Glazier, at Key West, in December, 1880; and Assistant Surgeon John F. Groenevelt, at Chandeleur Island Quarantine, on June 29, 1891. To these may be added the death, in 1889, of Passed Assistant Surgeon F. M. Urquhart, whose illness was the result of exposure and overwork incident to quarantine duty.

From 1878 to 1893, inclusive, five officers have died of disease incurred in the line of duty, in a corps that does not attain a total, in the fifteen years, of a hundred officers. The mortality among the officers is greater from the cause than from all others put together. Besides these deaths, several officers on quarantine duty have been dangerously ill, but have recovered.

The reason for calling attention to the matter is a gross injustice that the United States Government does to these officers. A young physician entering the Marine Hospital Service knows that he may be on duty at some port where yellow fever may break out, or he may be ordered to duty where it exists. It can not be denied that he has full knowledge of the contingencies associated with holding his commission, just as the medical officer of the army or navy has that he may lose his life in warfare; but in the army or navy a pension is granted to the family of the deceased, while those dependent upon an officer who is fighting against the invasion of disease are not only bereft of their relative but deprived of all support. In most of the instances that are herein specified dependent relatives have been left to provide for themselves as best they could.

It is not credible that the American people would be willing to perpetuate such an injustice if the matter were presented for their consideration. Surely in case of death under such circumstances a pension is as justly due to the family of the deceased officer as it is to the family of one that loses his life in military warfare.

It is understood that a bill will be prepared and introduced into Congress at an early date, providing for a proper pension to the dependent relatives of a medical officer that has lost his life in the noblest way it is possible for man to die—in the discharge of duty.

The William F. Jenks Memorial Prize.—The third triennial prize, of five hundred dollars, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "Infant Mortality during Labor, and its Prevention."

The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with obstetrics, or the diseases of women, or the diseases of children;" and that "the trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia"

The prize is open for competition to the whole world, but the essay must be the production of a single person.

The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., before January 1, 1895, addressed to Horace Y. Evans, M. D., Chairman of the William F. Jenks Prize Committee.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelop bearing the same motto and containing the name and address of the writer. No envelop will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

The Use of Curved Skin-Incisions.—Beale (*Lancet*, No. 3645, p. 84) gives the following reasons for preferring curved to straight skin-incisions: Curved incisions heal more rapidly, because there is really but one edge to the wound (that belonging to the flap) that is movable; moreover, the flap having been stitched to the neighboring skin or held away from the seat of operation, both edges of the wound are quite uninjured when the sutures are to be introduced. The resulting scar is smaller, although this is only of importance in certain parts, for the skin may be incised obliquely in making a curved incision, so that the epidermis at the edge of the flap is slightly in advance of the true skin. The curved incision fully exposes the parts to be operated upon (assuming that the base of the flap is twice or three times its length) and gives the operator plenty of room in which to work. Suture of the edges is easier than in the case of a straight incision, especially

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if the skin be pricked in one or two situations exactly opposite one another before the incision is made, and often the curved wound is adapted to the shape of the part better than a straight one. The resulting cicatrix is not over the seat of operation. Drainage is often most perfect by inserting a tube through an incision in the base of some part of the flap, thus giving no hindrance to the primary union of the incision, and preventing any possible discharge from infecting the edges. Incision through inflamed or diseased skin can be avoided, and yet the disease be easily reached. There need be no tension upon the edges of the wound, as a flap of skin is, so to speak, loose, and if there is fear of tension, a thick silk suture may be passed through the base or some part of the flap and out again, and then through the skin on the opposite side of the incision, and there fixed, thus avoiding a long suture beneath either flap edge of the wound.

Homeopathic and Faith-Cure Statistics.—The *People's Health Journal*, a homeopathic journal, of Chicago, publishes an exhaustive report of an exhaustive investigation by an exhausting homeopath, of the comparative statistics of homeopathy and "allopathy" as to the relative success in the chief American cities in the cure of disease. Of course, in every instance, the poor "allopath" comes out with a sorry showing. The percentage of cures of the successful homeopaths should convince a doubting world, if figures could do it, and should make us hang our heads in bitter shame. Three simple facts, however, should be noted: 1. An attack of "spring fever" is not, by an honest man, diagnosticated as typhoid fever, nor every case of "sore throat" classed as "diphtheria." Cure is easy and statistics cheap under such classification. 2. To have any value statistics must be gathered by impartial men, not by partisans 3. No statistics exist, or by any stretch of sane imaginations can be supposed to exist, at the present time whereon to base such conclusions or any conclusions whatever. "Figgers won't lie, but figgerers will."

The homeopaths' half-sisters, the faith curists, have also been holding a convention (conventions are fashionable nowadays), and had also their own splendid array of statistics. The *Boston Medical and Surgical Journal* says of these statistics:

Out of two hundred cures reported, of thirty patients a diagnosis of organic disease had been made,and there were the usual number of fractures which had been marvellously reunited by faith. There was no record made, however, as to the subsequent position and deformity. The time of this method of cure appears to be much shorter than that required by surgical means—as one case of a broken ankle was said to have been cured in five minutes.

The greatest curative effect of faith seemed to be upon erysipelas, for one hundred cases of speedy cures were reported. In what way the streptococcus is affected by a profession of faith was not clearly explained.

The only case not cureble by this means appeared to be rupture of the heart; for one person testified that by faith his child had been cured of colic, and a daughter of pneumonia. Their little one had been taken from them, but not by sickness; he died of a broken heart.

The Diagnostic Significance of Herpes Labialis.—Herpes of the lips is a symptom not uncommonly encountered in the course of an attack of cerebro-spinal meningitis and is considered of rather favorable omen in those cases in which it appears (*Med. News*). It occurs much more commonly in the epidemic variety of meningeal inflammation than in the tuberculoue variety. A series of observations by Felix Klemperer (*Berliner klinische Wochenschrift*, 1893, No. 29, p. 693), at Strassburg, would seem to indicate that some degree of confidence can be placed upon the diagnostic significance of this phenomenon in the differentiation of these two forms of meningitis. He reports three cases in which, by reason of the family history and other attendant circumstances, there was reason to suspect the existence of tuberculous meningitis, but in two of which recovery presumably, and a post-mortem examination in one that terminated fatally actually, negatived such a diagnosis. Examination of the contents of the vesicles in two of these cases and in nineteen others disclosed the presence of pneumonia-cocci, staphylococci, and streptococci, respectively, in individual instances. The inference would thus seem reasonable that the organisms thus found may be looked upon as the cause of the formation of the vesicles, and the thought further suggests itself that they may be the same as those that are responsible for the primary affection with which the herpes happens to be associated. As herpes is of common occurrence in the course of diseases attended primarily or secondarily with the presence of micrococci, and is of rare occurrence in association with diseases dependent upon specific microorganisms, it would seem that the appearance of the vesicles upon the lips may be considered among the points of discrimination in differentiating between the epidemic and the tuberculous form of cerebro-spinal meningitis.

Three Infectious Diseases Incubative at the Same Time.—Dr. J. T. C. Nash writes to the *British Medical Journal* that he recently had under his care a child of three and one half years, in whom were developed within a week the following infectious diseases in the order named: whooping-cough, chicken-pox, measles. The incubative period of pertussis is stated to be a few days, that of chicken-pox to be variable, and that of measles from seven to ten days, and the point of interest, the writer holds, is that three distinct poisons should flourish in one *corpus vile*, and come to full maturity at one and the same time.

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ORIGINAL ARTICLES

General Paralyses or Paralytic Dementia.

BY D. R. PELTON, M.D., TOPEKA, KANSAS,

Neurologist for the A., T. & S. F. R. R. Hospital Association.

Read before the State Medical Society at Topeka, Kansas, May 12, 1893.

GENTLEMEN.—This disease offers to us a large field for study. A field for pioneer work, notwithstanding the disease has long been known.

There are, indeed, so many phases of nervous disturbance with mental derangement classified as dementia or general paralyses that it has been and is now a question by some authors if we have not classified several diseases as one.

Then again the early symptoms are so obscure it is difficult to make a diagnosis sufficiently correct to give the patient the benefits of an early and intelligent treatment.

While heredity unquestionably furnishes a basis for its development, there are yet other factors equally as potent in their effect, viz:

The rapid push of American trade, the ardorous tasks and struggles for promotion in our present system of education as well as in immoral practices and dissipation.

The wants of our profession to-day is an early recognition of these cases which have a paretic tendency. This is not easily done, perhaps in the field of general practice, for the classification of the various nervous derangements and their phenomena would be as laborious as the naming of the stars in the canopy of heaven, but enough can usually be seen to suspicion some mental or nervous derangement and justify the aid of a consultation as you would call an oculist or gynecologist, and classify as early as possible the functional from the structural diseases, and your systemic from your local, and thus fix a base from which to establish intelligent treatment.

Rather than worry you with a long essay on the history of this disease, or with the anatomy, physiology, and histology of the brain which you all have access to in medical works, I will simply report a couple or three cases out of the number which have come to me, and although the nervous phenomena was well marked, the true nature of the trouble was not disclosed to their family physician and friends.

CASE 1. Mr. A., a contractor, aged 50, while on duty received an injury of the right leg from a fall, and for several weeks was obliged to walk with crutches. Suddenly paresis developed in the right arm, at the expiration of about three weeks (entirely discarding the crutches the time) he came to me through the kindness of his physician for examination and treatment.

On investigating the case I found incoordination in walking, aside from lameness from fracture, a stiffness and unweildiness of the muscles of both legs and dizziness. A nearly normal sensibility in the right arm and hand, but motor power greatly diminished. There was also incontinence of urine, loss of sexual powers and constipation from lack of peristalsis, these latter troubles had come on gradually since a severe sickness about nine years ago, constantly soiling his bed and clothes to which he seemed to pay little attention.

There was also deafness in the left ear, both with and without contact, coming on simultaneously with the vesical trouble; also, complains or describes formication of the left face, by leading him indirectly with questions.

I found, also, some vasomotor disturbance, and a stolid mental state, but he was excitable and fault-finding at times; was troubled with insomnia; had hallucinations of sight and sound; saw persons walking around his bed, beautiful flowers on the wall, said they disturbed him, but said also that he knew they were apparitions; that is, he was able to correst the hallucinations as he was also illusions which he had.

These statements were not voluntary, but drawn out by conversation.

His speech was a little blurred, psycic word tract sluggish; patient admitted abrasion and sores on glans penis in early life, but said not to be of a syphilic nature. Also admitted making liberal use of spiritous liquors, although not to drunkenness. His history dated back some nine years.

CASE 2. Mr. S., a farmer, aged 31, single, has ataxic speech and unsteadiness of gait and dizziness. It came on gradually for eight years past, at which time he was disappointed in marriage. His father died, aged 50, of pneumonia. He has a brother similarly effected as himself.

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On examination I found knee reflexes good, no ankle-klonus; sensation normal but slow; muscle sense im paired somewhat; incoordinate locomotion, feet stand apart; he inclines towards left side, left shoulder droops. Some difficulty in standing with eyes closed; muscle strength good; ovula deviated to the left and left pillar of fauces droops and its sensory reflex lost; tongue protruded with difficulty; the pupil of the right eye larger than the left and less active in light. Memory poor, mind sluggish, despondent and abstracted; attention slow and of short duration; bulbar trouble; speech under effort explosive. He was treated for catarrh and afterwards sent to a specialist for naso-pharanygeal tumor, none found, but paralyses of paliti muscles, and kindly referred to me for examination and treatment. April 9 echimosed palet, slough on pharanx and ovula from loss of nerve enervation.

Case 3. Mrs. C., aged 52, wife of a financier. The history of her case gives a gradual change in her dispo sition, which came on after a heavy financial loss six years ago. Great emotional excitement; fits of crying and despondency, with vasomotor disturbance within the last three years, followed by hypocondrasis and suicidal suggestions. She has delusions of pending starvation, and friends turned into enimies. Is easily excited at times; is insomnalent and has fallen away in flesh from 200 pound to 125 pounds. Right leg above knee measures one inch less than left and below knee one and one-half less. The tongue on protruding deviated to the right. Reflex in left leg normal, but absent in the right. Pupil reflexes normal; at times quite talkative. Urine on examination diabetic and history seems to indicate its existence for several months. This case has also some peculiarities; just how much the diabetic urine depends upon the nervous derangement and how much of the nervous derangement depends upon the diabetic urine you may conjecture.

I have chosen these cases on account of their opposite characters.

As you will observe the departure from health in the first case was in the sensory and lumbar cord-center,and later effected the mental and voluntary motor powers. While in the second case and also in the third, the mental deterioration came first, then followed by paresis in its various forms.

There was a time before the decided mental and somatic changes took place in each case that the difficulty rested in the circulation and nutrition simply, but the question arises what caused these changes in the vasomotor and trophic centers?

In the one case it might have been excited by alcoholic excess or from the sickness in former years.

In the case No. 2 a hereditary tendency may have figured, as a brother seems to be following in the footsteps of this disorder, and yet some say that heredity is noth ing, or if it is, it must be transmitted by microbes in spermatozoa through the germ or through the circulation by the mother.

In both the second and third cases, perhaps, the exciting causes was the taxation of the emotional centers, thus exciting vasomotor disturbance, resulting later in vacuolization of the spinal and ganglionic and cortical cells ushering in the somatic phenomena described by some authors.

In cases of paralytic dementia, aside from those of traumatic origin, there are those of a functional nature, which sets in action the prenatal tendency. In the primary stage there undoubtedly exist a simple functional and vasomotor disturbance. It may commence in various localities, depending upon the excitant cause and having a tendency to assume a progressive course. The capillary vessels in the brain become dilated and leucocytes migrate into the peri-vascular space; the lymph channels become clogged with accumulation of lymph cells and they press into the inter-spaces. New changes commence in the protoplasm, for metabolic actions are diminished from less trophic stimulus in the gray matter. The neuclear and cortical cells undergo a granular degeneration of their protoplasmic substance. The accumulated and enlarged lymph cells surround the cortical brain cells and feed like phageocytes upon the protoplasm to the evacuolization of their cell body. Perhaps this brain and diagram will illustrate the case more fully.

I here present the brain of a man which has some of the characteristics of a paralytic dement. The dura was adherent to the vertex and the temporo-sphenoidal lobes, and was torn in removing. A degenerative change had taken place from the previous changes of the cortical vessels, causing a porous appearance of the tissue. The vessels are enlarged and tortuous. The patient died in a state of delirium and convulsions, succeeding a condition of mental deterioration which had progressed gradually for the past eight years. This diagram is to illustrate the entrance of the pial artery into the cortex; of its dilatation during its stage of congestion migration of leucocytes into the peri-vascular space the peri-vascular sack in which are the nerve cells of the lymph channels which become clogged; of the growth of the ganglia cells into scavenger cells, and of its destructive effect upon the ganglionic cell and its long processes connecting with the lymph channels, and of its later fibrilation and contraction, producing sclerosis of the brain and cord, and of the vacuolised ganglionic cells of the cord and brain.

Could we expect less in this condition than mental deterioration, loss of functional activity and impaired sensibility, when the brain and cord are thus effected?

This is but the commencing of a more permanent and lasting structural change upon which depends the multitude of paralyses and violent mental condition that require commitment to state and private institutions for treatment, care and restraint.

Now the neuroglial cells and leucocytes have undergone structural changes; also elongating and and contracting like connective tissue, multiplying the neuroglial and diminishing the myaline, making the condition known as sclerosis of the brain and cord.

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To numerate all the changes would take a space that I cannot demand. I have only spoken of some of the most prominent changes, that your attention may be called to the investigation of its morbid anatomy.

Now, gentlemen, what can we expect from treatment? Surely in the last stages we have little hope of better ing their condition. In the second stage we may possi bly modify or postpone the fatal issue for a time, but in the early stage, before vacuolization of the cells have taken place, is when we must meet the demands for interference.

Again a difficult problem rises up before us. Now, shall we reach the case in its early history when naught but vasomotor and functional changes can be found? It is only by eternal vigilance that we are able to read the handwriting upon the wall, and who, in the busy crowd of general practice, is able to discern the small dark cloud which in time shall obscure intellectual vision or burst like a cyclone into a fit of maniacal furor compelling some measure of restraint of the unfortunate victim.

While this class of diseases is steadily crowding on in our rapidly developing civilization, amid the struggle for supremacy and prosperity with its accompanying emotional tension, our profession is rushing away in search of the microbe or to climb the mount of glory in operative surgery, while mental and physical decline is lying at our door unheeded.

To amputate useless members is well; to remove an offending tumor from the abdomen is grand; to excise a growth from the field of the brain with success is noble, but to be able to evert the necessity for the same is the greatest of all.

It is not a matter of new remedies in the treatment of these diseases, for the physician of to-day is loaded down with drugs. As the warrior of old was powerless in his coat of mail—when down could not rise to his feet and when up could hardly stand—so are we encumbered with a mass of useless stuff which hinders our better use of medicine.

More study of the nature of disease and less attempt at speculative and heroic treatment without an understanding of its pathology would increase our success.

In fact, genlemen, if our foresight were as good as our hindsight, we might save many a body from being a physical and mental wreck.

But, gentlemen, as hard as we may labor and as high as we may attain in our profession, the generations to come shall climb on and up the towering heights of science until we look like mere pygmies below. But we may glory in the fact of being the stepping stone to their success.

Western Reserve Medical School.—Professor Gad, of Berlin, has been appointed Professor of Physiology in the Medical School of the Western Reserve University, Ohio. The required school term each year hereafter will be eight months.

Sanitation of Cholera in the Country or Inland Towns.

BY W. F. MILROY, M.D.,

Professor of Clinical Medicine and Hygiene, Omaha Medical College.

Read before the Nebraska State Medical Society at Nebraska City, May, 1893.

While it is true that the American Continent, through the aid of the sea-board quarantine, escaped a visitation of an epidemic of cholera in 1892, it is also true that in the minds of many sanitarians there is little doubt that the disease will effect an entrance to the country in 1893. Indeed, at the present time we are informed that three hundred emigrants, having been quarantined the required six days at the point of departure and having successfully passed the quarantine at Halifax, are now detained at quarantine at Winnipeg, two of their number having died while on the journey westward. It is certain that you and I, as practitioners of medicine in Nebraska, will not be called upon to care for any of those who fall sick with cholera while upon the sea or at the point of landing; but is it not possible that the very man of us who is practicing at the most remote corner of the whole state may be the one to see the first case of the disease that shall appear within our borders? Let us see. Cholera, we have been taught (first by Koch and afterward by many others, whose knowledge we cannot doubt), is always caused by a certain microorganism properly a spirillum but by common consent called the "comma bacillus" as originally named by its discoverer.

This little creature has its home at the mouth of the Ganges River. Thence it is carried by the Indian pilgrims and others in all directions, mainly following the course of commerce. A certain degree of moisture is necessary for its existence and when this is present, at ordinary temperatures it may exist for months and perhaps indefinitely. What would be easier than that among the clothing of an imigrant, not over cleanly, a garment soiled with discharges from a cholera patient and still moist should have been packed away. It is true that the baggage of these people is disinfected when they land but may not the process be imperfectly performed in one case among the thousands that are landing each week? If this garment shall happen to be unpacked in Nebraska City it is probable that the cholera will first appear in Nebraska City; but if the owner shall go to join his friends on a farm out in Frontier County it will be yonder that the disease will show itself. In short, any one of us is liable to be called to a case of genuine Asiatic cholera at any time during the next four or five months. If it should so happen, what would we do? I shall not discuss the subject of treatment of patients suffering with this disease but concern myself only with certain sanitary measures looking to the prevention of the spread of it.

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In talking the other day with a member of the excellent fire department of Omaha, he described to me his experience in a recent sixteenth street fire when called upon to enter a very low basement for the purpose of extinguishing a conflagration that was known to have its source there. It was in the night. The place was well filled with materials for the storage of which it was used. No bright blaze could be seen, but a dense cloud of smoke pervaded the air. With smarting eyes and wet handkerchiefs over their mouths, and heads as near as possible to the ground the men crawled in, casting the streams from the hose in every direction hoping that by chance they might drown the fire. The situation was perilous; there was great waste of water, of verp precious time, of labor; and the goods were badly damaged by the floods of water. Had the fire been above ground and where it could have been seen a very brief time with well-directed energy would have put it out with little damage by fire or water.

It occurred to me, as he talked, that he was giving me an account of the relation of the medical profession to cholera prior to 1893, when Koch discovered the comma bacillus. It has already come to be recognized as a fact that the specific poison of the disease was derived from the alimentary tract of its victims and was usually conveyed to others through the medium of drinking water. Its destructive character was fully realized but its nature was only a matter of surmise. The attack upon it was a groping in the dark and the aim was a random one. No regard was paid to the cost of powder burned and so thousands of dollars were wasted in disinfectants that were used without stint but without knowledge.

During the past decade the cholera spirillum has become known and its life history thoroughly studied. Fraenkel's (Text-Book of Bacteriology) description of the germ is as follows:

"Its true form appears, indeed, very distinctly as a short, rather clumsy rod, about half as long as the tubercle bacillus, but considerably thicker with round ends and a more or less pronounced curve along its longitudinal axis. The degree of curvature varies from almost straight cells to nearly semicircular ones. It corresponds closely in appearance to the comma of certain faces of type for which reason Koch gave this bacterium the name of 'comma bacillus' by which it has attained general celebrity and which we shall retain on account of its historical significance."

This author goes on to explain that it is not, strictly speaking, a bacillus, but that the rods are to be looked upon as only fragments of a real spirillum although the fully developed spirillum appears to occur only under special circumstances. Of the best methods of cultivating and mounting these germs I will not stop to speak. It is not yet fully known whether the comma bacillus forms spores or not. A few able observers, notably Hueppe, have claimed that it does, but the great preponderance of evidence is in the negative.

While the comma bacilli are said to crowd and whirl through the microscopic field "like a swarm of dancing gnats," under favorable circumstances, still it has been ascertained that they are among the most sensative micro-organisms known.

Fraenkel says: "High temperatures (above 50° C.), kill them in a short time. They can not withstand the action of chemical agents, especially acids. The acid of the gastric juice destroys them absolutely; they do not thrive on gelatin containing a trace of acid reaction. An extremely important quality is their destruction by drying in a very short time; for while they retain the power of development for months in moist surroundings they perish in a dry condition frequently within a few hours."

With these facts in view it is possible to meet the approach of an epidemic of cholera without great trepidation. It is possible to restrict its spread without a blind and undiscriminating quarantine and that much more effectually.

Speaking only with reference to such cases in town or country as may occur in our own state, I may mention a few practical sanitary points that experience with cholera and laboratory experimentation have shown to be useful.

In 1885, in response to the invitation of the Italian Government, an International Sanitary Conference met in Rome for the purpose of considering measures of prophylaxis against cholera. Besides destruction of the goods, steam at 212° F., carbolic acid, chloride of lime and aeration were recommended. Carbolic acid two per cent, chloride of lime one per cent, were called the weak solutions. Carbolic acid five per cent, chloride of lime four per cent were called the strong solutions.

For the disinfection of persons one of the weak solutions should be used and goods that are too valuable to be destroyed and are suspected of having been contaminated should be immersed for twenty-four hours in one of these weak solutions. Vomited matter and dejections of the sick should be mixed with one of the strong solutions in quantity equal to the material to be disinfected. Linen articles, if not immediately subjected to steam, when soiled with the discharges, should be placed in one of the strong solutions and left for four hours.

While it is true that the comma bacillus can not survive a temperature of 140° F., or even somewhat less, it is easiest and safest to instruct that articles to be disinfected by heat be boiled. Steam is the best disinfectant for rooms where it can be made available and it is much more easily available than many imagine. In any town which is in possession of a fire engine this may be used for the purpose. India rubber hose is made which will endure a temperature of 212° F., aud over, and by these means a house may be filled with steam at a temperature from 175° F. to 212° F. The length of time of exposure necessary will vary from twenty minutes to three or four hours. Feather and hair mattresses, etc., are penetrated by the steam with the greatest difficulty of any ordinary articles of furniture. With nothing

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more resisting than carpets or bed comforts, a half hour is long enough. Of course the room to be disinfected must be closed as tightly as possible and the contents of it so placed that the steam may reach it from all sides. In case steam can not be used sulphur should be burned in the proportion of not less than three pounds for each 1,000 cubic feet, the same precautions having been taken as for disinfection by steam.

Common lime, recently slaked, is an agent that has for years had a reputation of a rather uncertain character, as a disinfecting agent. Very recently, however, Dr. Sternberg and others have shown that in genuine merit it stands at the fore for usefulness in cholera. The spirillum of cholera and various other organisms found in the dejecta of patients are quickly destroyed by a freshly prepared milk of lime, and recently slaked lime thrown into cesspools and vaults is considered one of the most reliable means for the disinfection of large masses of excreta. Chlorinated lime also is excellent, but as it must be put up in a closely-stoppered, air-tight package it is very much more difficult to obtain and much more expensive than lime.

It might be mentic ad, in passing, that sulphate of iron, so long and wide y known and used as a disinfectant, has been found utterly useless, and must be discarded. It is, however, an excellent deodorizer.

The Imperial Board of Health of Germany has recently published the results of an extended series of experiments made to determine the time the cholera spirillum will survive upon the pulp of various kinds of fruit and upon the surface of fresh and salted fish, etc. The following report of it is by Sternberg in the *Sanitarian* for April, 1893:

"Upon fresh flounder, carp and shell fish the spirillum had died out in two days; upon smoked or salted herring in twenty-four hours. Upon confectionary of sugar, chocolate or almonds, no development occurred after twenty-four hours. At the room temperature the spirillum survived upon sweet cherries from three to seven days; upon sour cherries, three hours; strawberries, one day; pears, two to five days; cucumbers, five to seven days. At the temperature of the body the time during which the spirillum retained its vitality was as a rule somewhat less. Upon the surface of dried fruits the spirillum could not be recovered after one or two days. When the dried fruit was moistened the time was longer. In cold coffee the spirillum survived two hours; in milk, not sterilized, twenty-fonr hours; in milk sterilized it was still living at the end of nine days; in tea (two per cent. inf.), four days; a three per cent infusion, one day; a four per cent infusion, one hour; cocoa, one or two per cent solution, still living at the end of seven or eight days."

Uffelmann, who has also experimented in the same line, recently published the result of his work. He found that the cholera spirillum survived upon the surfaces of slices of rye bread, freely exposed to the air, for twenty-four hours; when the bread was wrapped in paper, for three days; and when it was placed under a bell-jar, for seven days. Upon slightly acid butter the spirillum survived for from four to six days. On roasted meat which was protected from drying by a bell jar development still occurred at the end of a week, and upon smoked fish on the fourth day. His investigations showed that the spirillum may survive upon the printed pages of a book for seventeen hours, and upon writing-paper enclosed in an envelop for twenty-three hours and a half; upon silver and copper coins for half an hour; upon the dry hand for an hour but not for two hours. He also concluded that upon textile fabrics which were apparently dry the spirillum survived four days and it was still living upon moist goods at the end of twelve days. These facts I mention as giving us definite information as to the length of time we must be on our guard against poison from contaminated articles of food, etc. Among the carriers of the infecting germ is the common fly, and since this is true one may never be sure that his food does not contain it, if a fly has lighted upon it since last it was subjected to heat. How infinitely more destructive would the disease be were it not for the rapid destruction of the germ by desiccation and by the healthy gastric juice.

During the prevalence of an epidemic of cholera no water should be swallowed which has not been boiled and the same should be said of milk unless one is absolutely certain that it has had no opportunity to become contaminated. The diet should be regarded with great circumspection and yet not too much restricted. Overeating should be avoided and great care exercised to eat only those articles which tend to keep the digestive organs in a healthy condition under ordinary conditions.

It must be remembered that cholera is no more a contagious disease than is typhoid fever and that the suppression of an outbreak of it does not depend *per se* upon the absolute isolation of the cases. The rigid enforcement, in each individual case, of measures with which we are well acquainted, must certainly prevent the spread of the contagion and we may meet it fearlessly (as could not until recently be done), because we know that we are equipped with weapons by which we can surely conquer. I have faith enough in our modern science of hygiene to enable me to believe that, although cholera should appear upon the same day in a thousand different places throughout the United States, in each it would be suppressed and no epidemic would occur.

Probably the most complete work upon the subject of cholera is the report of Dr. Edward O. Shakespeare, which covers nearly one thousand quarto pages. In closing this magnificant production Dr. Shakespeare says: "It has been shown that the chemical products of virulent cultures of the bacilli of cholera, as well as the chemical products of certain other specific pathogenic bacteria, possess the etiological and prophylactic powers of the living bacteria. In view of the progress of recent discoveries in this direction, it does not seem at all improbable that in the near future the chemical poison of cholera elaborated during the artificial growth and development of the comma bacillus of Koch, and extracted in pure form, may become our most potent and ready weapon of defense against the devastations of cholera infection."

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EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

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A New Diagnostic Sign of Typhoid Fever.

Considering the fact that in many cases of continued fevers in which for days and weeks no positive signs of typhoid fever are present but where later on unmistakable symptoms of typhoid fever develop, a certain diagnosis is in the beginning exceedingly difficult—unless we accept the views of many authors that every continued fever is typhoid—every aid in diagnosis must be welcomed and especially so when but little time is required for the diagnostic procedure. Dr. Simon Baruch has pointed out a new symptom in the New York *Medical Journal*, Sept. 2, 1893, as follows:

"So soon as a patient shows a rectal temperature above 102.5° in the morning and 103° in the evening for three successive days, especially if accompanied by headache, dullness, or apathy, he is placed into a full bath at 90°, which is reduced to 80°, with constant friction over the body. In three hours, the temperature still being above 102.5°, he receives another bath five degrees cooler. This is repeated until the temperature of the bath is 75°. If one or more of these baths fail to reduce the rectal temperature two degrees in half an hour, the diagnosis of typhoid fever is almost certain and the bath treatment is continued.

The point emphasized is that the resistance of the rectal temperature to a bath of 75° for fifteen minutes with friction is an almost certain test of typhoid fever.

If the rectal temperature before and after a bath of 80° to 75° is not reduced at least one degree in half an hour, the diagnosis of typhoid may be safely made, if other symptoms point ever so slightly in this direction. Hence the diagnosis of this disease should no longer be obscure even in the first days of its course."

Should these results be verified by other observers, the discovery certainly will furnish an invaluable aid in the early diagnosis of typhoid fever in doubtful cases.

Retention of Vitality of Cholera Germs in Ice.

Koch has drawn attention to the fact that the vitality of disease germs in nature differs from that in the laboratory and cites as one instance the fact that cholera germs die in the laboratory wherever putrefaction is going on in their presence, while they have been found to live in privy-vaults for months. Disease germs in general die in pure running water, but in water as found in nature they may be attached to small particles of vegetable matter, while otherwise the water may be pure in a sanitary sense. The cholera bacilli are known to be very sensitive to cold, yet epidemics of cholera have occurred in the severest winters. This was the case last year in Nietlebeu, near Halle, Germany, where Koch had traced cholera cases to the use of ice and in consequence of this fact Prof. Renk of Halle has recently made researches with a view of ascertaining the capability of cholera bacilli of living in ice. The conclusions drawn from these researches, which have been published in the Fortschritte der Medizin, are that in ice cholera bacilli are not capable of multiplying after the eighth day. Judging from analogy it will be impossible to say at present whether the same behavior of the germs prevails in nature.

The Ideal Hospital.

There are but few things of as much importance to a large community as a properly equipped hospital. Next to general hygienic measures for the prevention of disease, the proper care of the sick is a chapter of paramount importance to every citizen, in fact, the properly conducted hospital furnishes an important factor in the prevention of disease. We hope and trust that in proportion to the thoroughness of medical education the public will aid the medical profession in its efforts to secure the best equipment for charity hospitals. What is really understood by proper equipment is not even known to all physicians, much less to the laity. We have before us a paper by Henry H. Hurd, M.D., superintendent of the Johns Hopkins Hospital, which covers pretty well our own views upon the subject, we miss, however, a mention of disinfecting methods of sputa, dejecta etc., probably the author took it for granted that the system of disinfection was perfect in all the hospitals which, however, is not the case in our experience. The paper referred to bears the title: The Relation of Hospitals to Medical Education and is published in the Boston *Medical and Surgical Journal*,

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Aug. 10, 1893. The following is an excerpt of the same.

1. Pathological Institutes.—First in importance I would place the organization of a good pathological institute in connection with every hospital. By this I mean much more than an autopsy room and a museum for the preservations of morbid specimens. These are valuable, but their work is not of prime importance compared with what may be accomplished by systematic investigations in all branches of pathological study. Facilities should be afforded for the study of every morbid product. There should be opportunities for systematic bacteriological examination of pus, serous effusions, the products of inflammation, the bodily secretions and excretions, false membranes, new growths and the like. The diagnosis of diphtheria and of follicular tonsilitis, for example, should here be made by cultures, cover-slip preparations and the microscope. The different forms of peritonitis should be differentiated similarly. The effusions of pleurisy should be studied bacteriolog ically to determine the presence or absence of the tubercle bacillus. Malarial fever should be differentiated from other forms of continued fever by the presence of the plasmodium. The micrococcus lanceolatus, otherwise known as the pneumococcus, should be searched for in pneumonia and cerebro-spinal meningitis. Such studies are impossible unless rooms are provided, specially fitted up with apparatus, instruments and trained observers constantly at hand for the purpose. These studies give a definiteness to diagnosis by excluding possible diseases of other origin; and certainty to prognosis.

The microscopic study of tumors and new growths while an operation is in progress and before its completion, is of equal value. Three examples drawn from actual occurrences in a Baltimore hospital, will serve to make my meaning clearer. A patient with a suspicious abdominal tumor, presumably malignant, had submitted to an exploratory operation and a frozen section, while she was on the operating table and before the operation was completed, showed the growth to be tubercular in character. The cavity of the abdomen was drained and washed out with a sterilized salt solution and the patient made a good recovery. A second patient seemed to be suffering from a simple abscess of the breast, but a bacteriological examination of the contents of the abscess cavity showed that the inflammation was tubercular in character and led to the examination of the surrounding tissues, which were found to be filled with tubercle bacilli. A radical operation for the removal of these diseased tissues then followed and a condition was found present which justified a grave prognosis. In another case a culture made during a severe abdominal operation subsequently showed that a chronic peritonitis had been caused by a virulent streptococcus and led immediately to the isolation and separate nursing of the patient to prevent the infection of the ward. Such instances are of daily occurrence and the wisdom of these expert examinations is fully established by repeated experience.

In dressings, also, subsequent to surgical operations, similar sources of infection are revealed by bacteriological examinations; and the communication of infection to other patients may be prevented by the knowledge thus acquired. This work, while of prime importance, ought not to impede the true work of a pathological laboratory, which is to study the origin, course and effects of disease upon every organ of the human body. Every large hospital ought to have a paid pathologist, whose whole time should be given to this form of study and he should be provided with a suffcient number of assistants to do this work thoroughly Diseased tissues and organs should be examined in gross at the autopsy table and afterwards the material should be studied in frozen sections and by hardened specimens. Cultures should also be made post-mortem of all products of inflammation to determine their precise character. These studies clear up obscure diagnoses and lead to the more successful treatment of other cases.

2. Clinical Laboratories.—Every hospital ought also to have a clinical laboratory for blood examination urinary analysis, the examination of the stomach contents and the examination of feces and sputum. The blood should be examined, as a matter of routine, in all forms of wasting disease. The value of the methods of Ehrlich in the different forms of leukemia is attested daily by practical observation. The differentiation of malarial from typhoid or other forms of continued fever, is frequently only possible when the plasmodium has been demonstrated in the blood. The importance of a bacteriological examination of cholera stools for the presence of the comma bacillus, has been recently demonstrated in the late cholera epidemic in Europe. The equal importance of searching dysenteric stools for the presence of amebæ coli has been demonstrated many times in the Clinical Laboratory of the Johns Hopkins Hospital during the past year. Abscesses in the liver and lungs and one jaw-abscess have thus been shown to be dependent upon this protozoan. The confusion which exists in the profession to day, regarding malarial hematuria, can only be cleared up by similar expert examinations. In such clinical laboratories syphilis often needs to be differentiated from tuberculosis by the microscope. Skin affections also, like urticaria, favus, the different forms of dermatitis, tinea versicolor and tuberculosis need to be similariy studied The presence of the otomycosis aspergillus in ear affections can only be definitely shown by the microscope. The tetanus bacillus, the streptococcus of erysipelas, the staphylococcus of suppuration and the pneumococcus of pneumonia and meningitis should also be similarly demonstrated when present In no other manner can medical education be made definite and thorough. The day of theories and brilliant hypotheses to account for many of these diseases is past and demonstration ought to replace them.

3. Operating Rooms.—Every hospital of any size, and especially a hospital to which medical students have access, should have surgical operating rooms ar-

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ranged for carrying out a perfect sergical technique. Here should be consistent and constant efforts to reduce the danger to patients from the infection of wounds to the minimum. These operating rooms should be object lessons in thorough surgical cleanliness. There should be apparatus for hand disinfection and facilities for scrubbing and cleansing the hands. Every step in the technique of antiseptic surgery should be carefully prescribed and followed. It is now evident that infection of wounds does not come through the air or from atmospheric conditions, but rather from actual contact. Pus-producing germs gain access to wounds at the hands of the operator or his assistants or by infected instruments or ligatures or through infected skin stitches or by subsequent dressings. Hence, it is of the utmost importance that the technique pursued in every hospital operating room be thorough and consistent to the end that every person may know the reason of the procedures adopted. Students and physicians should be trained to appreciate understandingly what is harmful and to be avoided and what is harmless and permissible. It may be asserted with confidence of no successful contradiction that, in the technique of many surgeons, unnecessary precautions are frequently taken and necessary precautions are as frequently omitted from a lack of adequate knowledge of the true sources of infection These can only be adequately taught by bacteriological methods. Ligatures, instruments, bandages and all forms of dressings should be sterilized in such a way as to meet every bacteriological requirement. Cultures taken from the first dressings, made subsequent to an operation, should not grow upon any form of culture media. Experiments which have been made in wound infection have clearly demonstrated its sources and its methods of prevention. Each operating room should be as carefully arranged to carry out antiseptic precautions as the laboratory of the bacteriologist. More than this may also be asserted. Every operating room ought to pursue careful and systematic experiments upon hand disinfection. No one believes that an ideal excellence has yet been attained. These fruitful experiments are alone possible in large operating rooms with frequent operations and abundant facilities for carrying on the work thoroughly. It is most gratifying to call to your attention the fact that two large operating rooms have lately been constructed in New York with every facility for this systematic work. If they contribute, as they undoubtedly will, to the simplification and perfection of surgical technique, their erection will fully justify the outlay, as large as it may seem to the unthinking critic.

4. Photographic Rooms.—An equally important part of the educational outfit of a general hospital should be a well-constructed and well-arranged room for photography. Here medical men should be trained to do photographic work in the various departments of hospital service. Each man should be taught the manipulation of cameras and photographic plates, and should learn methods of developing, printing, enlarging, etc. Photo-micrography has proven a very disappointing branch of photography. A poor drawing which accurately portrays what the observer sees is generally much to be preferred to the most finely finished micro-photograph with its blotches of color and flattened surface. Not so, however, with what may be termed gross medical photography. Its field of usefulness is apparently limitless. Many surgical conditions should be photographed upon the spot, even while an operation is in progress. The rapidity and accuracy with which newly-discovered or newly recognized forms of disease have been made known to the medical public, are well shown by the disease known as acromegaly. Although this disease was first differentiated and described by Marie, in 1886, its peculiar *facies* became at once familiar to physicians throughout the world by the excellent photographic reproductions which were distributed, and to-day it is easily recognized wherever found by medical men who have never been shown a case. In a similar manner cases of myxedema and the various forms of paralysis have been accurately portrayed, to the great advantage of the student of medicine. Photographs of skin diseases, deformities, muscular atrophies and hypertrophies, ulcers, tumors, aneurisms, surgical operations, surgical methods and surgical dressings, perpetuate these conditions much more clearly and satisfactarily than pages of description. In many instances these representations are sufficient to enable the observer who has not seen the case to confirm the diagnosis.

5. Charts and Graphic Representations; Histories.—Allied to photography are the various forms of charts and graphic representations. These should be made with absolute accuracy and regularity, and should form permanent records in the hospital. The same is true of medical histories, which ought to be made up daily at the bedside. Such medical histories should be classed, indexed, catalogued and rendered accessible so that any fact of medical interest may be referred to at a moment's notice. There should be a medical staff large enough to do this work thoroughly well. The influence of these careful records upon medical knowledge can hardly be estimated; their greater influence in training medical men connected with hospitals, to habits of careful, painstaking, exhaustive observation and faithful records of the same, is undeniable.

6. Dispensary Work.—The position of carefully conducted medical work in dispensaries or departments for out patients in training medical men is well recognized. The patients who present themselves for treatment at these clinics. more nearly represent the patients with whom physicians come into daily contact than ordinary hospital patients. Hence the same necessity in dispensary practice of training students in habitf of quick, accurate and thorough diagnosis and of painstaking records of the clinical facts which are obtained. Clinical methods and clinical records ought to be as systematic and complete in the dispensary as in the hospital. The facilities afforded by a dispensary for the

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study of physical diagnosis are, if anything, more valuable than those of a hospital. The same is true of the opportunity for learning the methods of diagnosis in minor surgery and the application or the ordinary surgical dressings. Practical work in the diagnosis and treatment of diseases of women is here feasible, and under competent supervision often proves most valuable. The opportunities for studying the specialties of medical practice are also of extreme value and should be utilized regularly. Every department of a dispensary ought to be under competent expert medical suyervision, and all branches should be so conducted as to promote the training of students. The practical difficulty in many dispensaries is that the clinical material is not properly utilized.

7. Libraries, Reading Rooms, Societies and Journal Clubs.—Every hospital should foster a good medi cal library and a reading-room filled with the best and latest periodicals, and all members of the staff should be expected to use them, and should have time to do so. In most hospitals the medical men are sadly overworked, and through a superabundance of routine work lose all time, and too often all inclination, for medical reading or study. The advantages of a medical society and of a journal club are too obvious to require more than a mere brief mention. These organizations should exist in the staff of every large hospital.

8. Medical Staff.—A careful consideration of the subject leads me to urge that all large hospitals be furnished with an increased medical staff, and that the terms of service of a portion, at least, of the medical men be considerably increased. It is evident to all who have watched hospital work, that the usual term of service extending over a period of twelve, sixteen, or eighteen months, brings active young men fresh from medical schools into hospitals to send them out to give place to other inexperienced young men about the time they are fitted to do independent work. The hospital, consequently, suffers from the mistakes which they make while they are receiving training, and by an inex orable rule loses their services as soon as they are fairly well trained to do efficient and fruitful work.

In conclusion, I would urge the duty upon every hospital of doing every branch of hospital work as well and as thoroughly as it can possibly be done. If philanthropy recognizes it to be a duty to care for the sick poor and to minister to their comfort by convenient, well-appointed, well-ventilated and well-warmed apartments, the same duty demands that their medical care shall be equally thorough, painstaking and scientific. The best should be constantly striven for; and nothing but the best should satisfy those who are charged with their care. Every hospital should be an object-lesson in the proper care of the sick. It should demonstrate the best methods of medicine, surgery, and gynecology, the most approved nursing, the best cooking for invalids and their kindest care.

CORRESPONDENCE

Higher Medical Education.

Editor Medical Review.—The subject of "Higher Medical Education" has been fully discussed and all of our reputable medical colleges have adopted a three years course as a prerequisite for graduation; but to what I wish to call your attention is, where do those physicians stand who have taken but two courses of lectures and received their degrees? According to the requirements of the boards of health in their recent requirements the two courses of lectures do not qualify a man to practice medicine and surgery in the United States and consequently we should all be made to go to college for at least another year in order to comply with the new law. I must say that I am one who believes that it is not the number of courses of lectures that we have attended that make us doctors; but it is the common sense and a knowledge of the branches we have passed over.

One student may attend 40 courses of lectures and still not be qualified to practice medicine, while another may be well qualified after attending one or two courses. A student must have a fair English education to begin with, It is a mistake to think that we can pick up any common bootblack and by compelling him to attend three courses of lectures and giving him a new diploma printed in latin and starting him out to practice that he understands his business better than a physician who has taken only two courses and practised for a number of years and has good common sense and a fine English education to back him. I believe physicians are born as poets are born and every man can't make a successful physician because it would be raping nature. I knew a student once who had taken six courses of lectures and then failed to pass the examination in order to get his degree.

I am in favor of raising the standard of a medical education but claim that the number of courses will not do it. We should require a larger per cent of answers to our questions in our final examinations for it is only by a personal examination that we can test our students' knowledge of the branches passed over. The student who never loses sight of his books and journals after he has received his degree will succeed while those who think a diploma is all that is necessary to practice medicine will make a complete failure.

There are too many young men of to-day entering professions who have not the natural ability to make a success and many are led to believe that the reason of their failure is because they did not take enough courses of lectures. I have seen students in my boyhood days who had attended school for a number of years and worn out the seats of a number of pairs of pants waiting to graduate in the common school branches while others in one fourth of the time would pass the graduation ex-

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amination with ease. Give us examinations by special boards and a longer list of questions and not allow college faculties to pass them and our medical standard will surpass any in the wide world.

St. George, Kansas. J. W. WILHOIT, M.D.,

[In answer to the above we wish to say:

1. That laws have no retroactive validity.

2. We agree with the writer that some students will learn more in two years than others in a life time.

3. That, although a student may have the best preliminary education and the greatest intelligence and working capacity, a two years' course is insufficient to fit him for the practice of medicine.

4. That, while there is nothing perfect in this world, the examination by a state board of examiners would, under present conditions, be the most advisable, provided the board would be elected by the profession and not appointed by politicians.—ED].

Physiological Effects of Currents of High Frequency.—D'Arsonval (*Acad. des Sciences*, Paris,) has investigated the high frequency discharges of Leyden jars attached to the secondary circuit of an induction coil. He finds that no stimulating effect is produced by them upon the organs of feeling or motion, even when the currents are of considerable magnitude; zones of diminished excitability and analgesia are established round the electrodes; considerable vasodilator effects are also produced. The current is not limited to the surface of the skin, but penetrates to the tissues beneath. He considers that they do not stimulate the nerves of common sensation because their periods of vibratioh do not correspond to the rates of vibration to which these nerves are sensitive; and that sensory nerves respond only to vibrations of suitable wave length, as is the case with the optic and auditory nerves.—Boston *Med. Jour.*

Hemoglobinuria and Syphilis.—Koster (*Therapeutische Monatshefte*,) relates a case of paroxysmal hemoglobinuria in a patient who had contracted syphilis four years previously for which he had undergene treatment on three occasions. As the result of most careful investigation, the details of which are given, it was demonstrated that walking only, whether in a cold or warm atmosphere, was sufficient to produce an attack, and the condition could not be made to appear by any other means. All treatment failed until subcutaneous injections of mercury were given every five to ten days, the perchloride being used on seven different occasions, whereupon the patient was discharged cured. The only subjective symptoms were slight abdominal pains during the attacks, and the point laid stress on by the author is the circumstance that albumen could never be detected in the urine except during the attacks, and that it never existed alone and unaccompanied by hemoglobin. Examination of the blood never showed any variation from the normal.—Boston *Med. Jour.*

ABSTRACTS

Treatment of Obesity and Fatty Degeneration.—Dr. G. H. Thompsom, Professor of Materia Medica, St. Louis College of Physicians and Surgeons, says:

It is not necessary to enter into a discussion of what constitutes fatty degeneration, suffice it to say that this condition generally co-exists with a tendency to general obesity or results from the abuse of alcoholics. Those having a tendency to general obesity, are usually partial also to diets rich in sugar and starches, and small amounts of carbo-hydrates added to such diet, greatly favors the deposition of fat. The hereditary tendency to accumulation of fat, in my experience, usually manifests itself in males at the age of thirty, sometimes earlier, sometimes later. In females usually at about twenty-eight. As long as fat serves its function only—that of adding rotundity to the form and serving as food supply—in times of sickness there is no necessity of seeking to eliminate it. It is, when it accumulates persistently, causing distress by its weight and interference with locomotion, or when internal viscera become so degenerated by substitution of fat for normal organic tissue, that distress is caused or life threatened, that, we should seek to correct its effects.

The members of the medical profession doubtless have their own ideas as to whether relief should be given on purely cosmetic grounds, or not, and it is not my intention to discuss this subject from such a standpoint. The question is, how can necessary relief be afforded? In endeavoring to throw some light on this question I take occasion to report a few cases.

CASE I.—Mrs. E., aged 28, weight 139 pounds, height 5 feet, complained that she suffered from heat. For two years she has been unable to stand the moderate summer elevations of temperature without great inconvenience. Perspired so freely that she was obliged to remain indoors most of the time between June and September on account of ruining her clothes with perspiration. No female or other trouble was present, but she seemed to have a superabundance of adipose tissue generally distributed, especially about the chest and abdomen. Habits regular, bowels and courses likewise. Concluded to see the effect of reducing her weight, and for this purpose, after trying fucus vesiculus in the dose of one to two drams of the fluid extract three times a day, with some slight benefit. I determined to try phytolacca decandra, which has been recommended by Dr. M. M. Griffith, as a potent measure in diminishing obesity. The preparation used was phytoline (Walker) a remedy prepared from the active principle of the phytolacca berries, after being somewhat frostbitten. The dose first used was gtt.xv four times a day. The patient used two bottles, after which she reported herself feeling very much improved, perspiration lessened, weight 128 pounds, appetite about the same,

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regular bowels and courses. I could find no bad effects from the remedy.

Case II.—H. W. M., aged 33, weight 160, height 5 feet, 6 inches, complained of precordial distress, difficult breathing, occasional attacks of vertigo, heart-beat feeble, irregular and slow, sometimes rapid, anemia, weakness in the legs, which were not very muscular. Patient was addicted to alcoholics, suffered consequently from dyspepsia and atony of the bowels. Diagnosis: Fatty degeneration of the heart due to alcoholism. Stopped his alcoholics, administered stomachic tonic of quinine, strychnine and capsicum, and gave phyto lacca (Phytoline-Walker) in the dose of gtt.x six times a day before and after each meal. In three weeks' time there was a notable improvement in every respect Weight had decreased five pounds, heart-beat fuller and more regular, precordial distress and difficult breathing ceased altogether, digestion improved, appetite likewise. Patient was on the road to recovery when persistent exposure to extreme cold brought on pneumonia, from which he died after five days' illness.

In these two cases there was no advice given as to diet except the withdrawal of alcoholics in the last case, it also being remembered that alcoholics antagonize the action of phytolacca.

Case III.—Mr. N , aged 54, weight 240, height 5 feet, 10 inches, complained of eczema of the legs and left side. Inspection showed in the left hypochondrium, a large circumscribed ulceration about two inches in diameter, surrounded by inflamed vesicular area; the legs showed similar ulceration in the skin. Patient perspired freely, almost to a point of hyperidrosis. During cold weather patient was not troubled, except from difficult locomotion and occasional attacks of rheumatism. Examination of urine showed no sugar. Appetite fair, drank considerable beer, bowels regular. Astringent salves and lotions cured temporarily. Diagnosed eczema, due to maceration. Placed patient on phytolacca (phytoline Walker's) gtt. xxv before and after each meal. In two weeks patient lost ten pounds, had somewhat less appetite, less perspiration, sores took on a healthier condition and after continuing the treatment about two months and a half, patient felt as well as ever, and tipped the beam at 200. Since then the patient has gained but little if any, perspires normally and has no return of his eczema and no recurrences of rheumatism. How long this condition will last, time alone can tell.

This last case was one, especially calling for some fat reducing agent, and the checking of perspiration. In this case bread and potatoes were exhibited, likewise other form of starchy foods; beer was reduced in quantity, two-thirds. These measures materially increased the fat reducing properties of the phytoline.

The next question is, how does phytoline cause the reduction of fat? This, I am at present unable to say. I have, however, noticed that the feces seemed to be considerably more rich in fatty materials than is normal, which condition cannot be attributed to indigestion, as in all other respects digestion was normal. Perspiration and urine was apparently unchanged by the action of the drug.

Officinal preparations of the root have been used with little or no result, except to cause continued nausea, vomiting and diarrhea. Phytoline does not cause nausea in the ordinary dose, and though slight laxative effects have been observed from it, I have never seen a pronounced case of diarrhea. The appetite is sometimes slightly diminished chiefly in the morning. It seems to me to be specially indicated in all diseases characterized by fatty degeneration of internal viscera, especially of the heart and liver. Those who choose to use it for its cosmetic effects in reducing fat, will also find in it a serviceable adjunct to properly restricted diet and exercise.

The Anatomy of the Cecum and Vermiform Appendix, and Its Relation to Appendicitis.—Turner (*Chirurgitchesky Vestnik*) has made a careful study of the regional anatomy of the cecum and vermiform appendix upon the cecum, with the following results:

In eighty three instances in which the appendix lay freely in the abdominal cavity its position was as follows:

In fifty-one it hung down into the lesser pelvis.

In twenty it passed transversely over the psoas toward the sacral promontory.

In six it lay freely on the iliacus or psoas.

In two it passed upward along the lateral surface of the ascending colon.

In three it lay in the meso gastric region, the commencement of the colon being located transversely.

In one it lay in front of the sigmoid flexure, upon the right side.

In twenty-two cases in which the appendix lay behind the first portion of the colon, between this and the posterior abdominal wall, its relative position was as follows:

In four it lay curled up behind the ileo-cecal junction.

In five it lay directly behind the cecum.

In six it passed intra-peritoneally along the posterior or postero-median surface of the colon.

In two it passed in the same direction extra-peritoneally.

In four it passed in the same direction, but partly extra peritoneally.

In one the fundus of the cecum turned upward and backward, the appendix lying behind it.

After discussing the influence which these varieties of location have upon the clinical course of appendicitis he draws the following conclusions:

1. The cecum is the initial portion of the colon, and is always covered by peritoneum, posteriorly as well as anteriorly.

2. The vermiform appendix corresponds to the cecum of animals from the point of view of the comparative anatomist, but has no physiological importance in man,

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undergoing in the course of its growth, several changes, the results of which are apparent late in life. The anomalies of its location can be explained upon embryological grounds. An especially frequent anomaly is the location behind the cecum.

3. Inflammatory processes in the region of the cecum originate almost exclusively from the appendix. The higher mortality in childhood and young adult life is due to the fact that the communication with the cecum is wider. The velum of Gerlach, if in existence at all, takes a very small part in the closure of the lumen at its point of attachment.

4. So-called "perityphlitis" is a circumscribed peritonitis originating from the appendix. Resulting abscess cavity from appendicitis lies intra-peritoneally.

5. "Paratyphlitis" is to be considered as a complication in the shape of a phlegmonons inflammation arising from an appendicitis, in which a perforation of the ap pendix takes place in those instances in which the latter lies behind the cecum and extra-peritoneally. Here, likewise, the cecum itself takes no part etiologically.

6. Circumscribed suppuration in the occasionally existing pouches of peritoneum behind the cecum may simulate a paratyphlitis, but do not show any tendency to spread in the connective tissue from the beginning. On the other hand, many of the suppurative processes in the cellular tissue of the lumbar region, such as su pra renal and paranephritic abscesses, etc., may be traced to affections of the appendix.

7. In the diagnosis of the appendicitis an examination of the lumbar region, as well as of the rectum, is indis pensable.

8. Exploratory puncture is not only dangerous in itself, but may lead to error.

The Regimen in Diabetes.—Etienne (*Arch. Gen. de Med.*) says: Enumerable experiences have shown that there are two facts which should govern all alimentation in diabetes.

1. To diminish the use of substances which are transformed into sugar in the organism.

2. To escape the lowering of vitality of the system necessarily produced by suppression of food-stuffs which almost all occupy an important place in ordinary alimentation.

Rye and wheat bread are to be replaced by some of the many unsatisfactory substitutes offered for them. Almond, gluten and other preparations from the seeds of vegetables or cereals have all their drawbacks. One of the best seems to be "aleurone" (vegetable albumin). It has an agreeable taste and is easily assimilated. It contains eighty per cent of albumin and seven per cent of carbohydrates.

Farinaceous vegetables are forbidden, especially the potato, peas and lentils. The green vegetables, salads, cresses, celery, and asparagus are permitted by the majority without restriction, while fruits are universally interdicted on all sides.

An exclusively flesh diet is in great favor with many practitioners, but it has the great inconvenience of causing loss of fat and strength, sometimes bringing on a sort of intoxication. Eggs, fresh butter, oils (olive and vegetable) supplement the flesh regimen nicely. Milk is not generally employed except as accessory to other forms of food.

The substitutes for sugar, glycerine and saccharin, as the substitutes for bread, have been weighed and found wanting. The simplest practice is now to reduce the amount used gradually.

The drink, par excellence, is water as pure as possible. White wine is recommended and the malt extracts have many warm partisans. The carbonated waters, Vichy, Seltzer, Royat, are often useful.

Dietetic regimen is not all in the treatment of diabetes, and it is necessary to employ other hygienic prescription. Brain work must be regulated. Excess is very prejudiced to the best results. In moderation and adapted to the individual muscular labor is most beneficial. A sojourn in a warm and agreeable climate, freedom from care and distractions exert beneficial influence. Hygiene, care of the skin ought to be insisted on with diabetics. Salt baths, dry friction are excellent practices, but every means calculated to provoke a sweat are to be avoided, since death even has followed a prolonged vapor bath.

The Etiology of Malaria.—The latest edition to our knowledge of the bacteriology of malaria (*Brit. Med. Jour.*) has been contributed by Dr. Julius Mannaberg, in a paper read before the Society of Physicians at Vienna. He divides the micro organisms connected with malaria into two groups: 1. Parasites with direct sporulation, without syzygies; 2. parasites with direct sporulation and with syzygies. In the first group he places the micro organisms connected with the quartan and tertian varieties of the disease; in the second, the pigmented and unpigmented organisms found in the blood of patients suffering with quotidian ague, and also those described as occurring in the malignant forms of tertian ague. Dr. Mannaberg had observed the latter variety before Marchiafava and Bignami described them, and corroborates these observers in every detail, both as regards the appearance of the parasites and the nature of the disease produced by them. Dr. Mannaberg furtner demonstrated, by means of special illumination, that the younger forms of all organisms are not found in the corpuscles, as Marchiafava and Celli maintained, but, as Laveran had previonsly shown, are to be seen adhering to the outside of the red corpuscles. As regards the semilunar bodies in the blood of malarial patients, which have been described by several observers, Dr. Mannaberg states that in forty-three cases of "summer fever" (due to infection by the organisms contained in his second group) he found them thirty-seven times. He considers that these semilunes are formed by the coalition of two to four ameboid bodies, and states he has been frequently able to demonstrate the approach of such bodies to each other and the subse-

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quent appearance of a semilune. Dr. Mannaberg opposed Laveran's views that the semilunar bodies were the result of the cachexia produced by malarial poison, for he had never seen them in the blood of patients suffering from the forms of disease produced by organisms of his first group when the ague had lasted for a very considerable period, but had frequently found them within the first few days of the fever in the blood of patients suffering from the more severe forms (secend group) of malarial poisoning, but in which cachexia was not marked. Finally, he considers the treatment of malaria by quinine, and maintains that the organisms are destroyed and rendered inert by the action of this drug.

Lister's Renewed Allegiance to Carbolic Acid.—It is not surprising to those who have kept pace with the progress of Antiseptics to hear Sir Joseph Lister, after twenty years' of investigation and experiment, declare his renewed allegiance to Carbolic Acid, as he did in a lecture January, 1893 at Kings College Hospital in London (*Annals of Surgery*, June 1893.

Carbolic Acid is not only a more efficient surgical germicide than corrosive sublimate, but it is much more efficient in cleansing the skin. It has a powerful affinity for the epidermis, pepetrating deeply into its substances and it mingles with fatty materials in any proportion. Corrosive sublimate on the other hand cannot penetrate in the slightest degree into anything greasy; whence those who use it require elaborate precautions in the way of cleansing the skin. All of this is unnecessary with carbolic lotion. Sir Joseph does not even use soap and water trusting entirely to the Carbolic Acid.

There is a new product of Phenol and Boracic Acid, in which has been mitigated the pungency of Carbolic Acid, disguising its odor, and greatly supplemented its efficiency by its combination with Boracid Acid, which, although admitedly slower in its action, it nevertheless, unsurpassed as a true germicide.

Rectal Injections of Carbolized Water in Catarrhal Rectitis.—M. Strisovere (*La Semaine Medicale*) has cured three cases of inveterate chronic catarrh of the rectum by injections of carbolized water. The first patient had suffered for nine months from a chronic diarrhea of unknown origin, and which had resisted all measures. Exploration of the rectum was painful. The mucous membrane was softened and velvety. The stools, to the number of three or four per diem, were of a gelatinous appearance. The patient was advised to take two rectal injections of carbolized water daily, ten drops of carbolic acid to two glasses of water, and to retain it six to ten minutes. From the third day on the stools diminished in number, and the feces began to take on a more normal appearance. At the end of a month the patient was completely cured, without having to follow any dietetic restrictions. The second case was of unknown origin, which had lasted for seventeen years, with intervals of two to three months, during which it would cease. Complete and definite recovery followed six weeks of this treatment. In the third case the chronic rectal catarrh had followed a dysentery of two years before. All methods of treatment had been tried and failed. Fifteen days of the treatment produced a cure. Hence the writer recommends a weak solution of carbolic acid, used as a rectal injection, as a good measure in rectal catarrh of whatever origin.—*Lancet-Clinic.*

Perforating Carcinoma of the Scalp.—Braun (*Archiv. f. klin. Chir.*), reports a case of cancer of the scalp, originating from scar tissue, in a child 12 years old. and growing rapidly until the fourteenth year when it came under his observation. It was then ulcerated and pulsating. He decided to remove it in successive operations, disinfecting the wound as much as possible before removing the inner portion of the growth, and waiting to close the external wound until the inner portion had healed without any sign of return *in situ*. The operation showed that the growth involved not only the skin, but the bone, dura and pia mater, and the brain substance itself. These diseased portions were removed in the successive operations, fine needles with catgut sutures being passed under the arteries of the pia mater and then the ligatures tied, while the diseased portion of the brain substance was removed by the knife or the actual cautery. After the removal of one return of disease *in situ*, the wound was closed by an osteo plastic operation, six months after the last sign of recurrence. The patient made a complete recovery with no symptoms of further disease.

The Effect of Compression of the Abdominal Aorta for the Relief of Uterine Hemorrhage.—Bishop, in a lecture delivered at the Ancoats Hospital, Manchester (*Lancet*), recommends compression of the aorta in cases of uterine hemorrhage as the quickest and most convenient manner of checking it. Time in this condition is of importance, because the longer hemorrhage lasts, the longer it is likely to continue on account of the general relaxation of the uterine tissue. The uterine arteries, through the internal and common iliac, start from a common source, the aorta, and can be controlled with the greatest ease by pressure upon it. The general condition of relaxation, and particularly of the abdominal muscles, from the bleeding, greatly favors this method of relief. The hand sinks into the abdomen without opposition until the sacral promontory is reached, and immediately above and to the left the main artery is discovered by its pulsations. He gives an interesting account of the pathology of uterine hemorrhage, and cites two cases of post-partum hemorrhage in which compression of the aorta was successfully used.

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MEDICAL SOCIETIES

Quasi-Insanity in Children.—At the last meeting of the Medical society of Pensylvania Dr. Charles K. Mills, of Philadelphia, presented a paper on Some Forms of Insanity and Quasi-insanity in Children. (N. Y. *Med. Jour.*).

In a philosophical sense sanity and insanity are relative terms whether applied to children or adults. Certainly not a few may be properly regarded as on the borderland between mental health and disease, and these are perhaps best classed as examples of partial or quasi-insanity, forms of mental disease which in a certain manner and degree have the attributes of insanity. Quasi-insanity better expresses the idea than such terms as partial or pseudo insanity, or borderland cases, for the prefix 'quasi,' as used in English, indicates that the thing spoken of resembles or has the attributes of something without being the latter in the full sense. Some of the best examples of quasi-insanity are to be seen in those suffering from those affections which are shown by morbid doubts and morbid fears, and have been described under many names, as *folie du doute*, introspective insanity; or as phobias in endless train—claustrophobia, agorophobia, pathophobia, pantophobia, etc. Some knowledge of these phobias and of what they import might be of value to many of my brethren not neurologists—to gynecologists and surgeons particularly. They are psychoses, which lead sometimes to oophorectomies and laparotomies, to uncalled-for operations and treatments of various sorts on all parts of the body. They are abortive or imperfectly developed mental disorders. Sometimes they are as transient in duration as they are limited in phenomena; but in other instances a few elementary deficiencies or disturbances may persist without much change or increase through life Many of these cases, like certain morbid impulses, belong under the general head of paranoia. They have been described not only as morbid fears or phobias, and as morbid doubts or abulias, but also as emotional monomanias, and even as forms of neurasthenia. They are fundamentally dependent upon the domination of the mind by morbid concepts and insistent ideas.

They are sometimes observed among young children, although more common after than before the period of puberty. Their most striking illustrations occur in those who have not been subjected to any physical or mental strain sufficient to break down a healthy organization. Persistent fear of the monomaniacal type occurring in children is rarely due to overwork at school, as is frequently supposed. The cause is generally in the child's progenitor or progenitors.

Not infrequently several of the so-called varieties are present at the same time, in the same case, and some cases belong to a class which has been well described as pantophobia, or fear of everything.

As to cases observed in comparatively young children Hurd reports one from an account written by the patient herself. When about twelve years old she began to have strange fancies, as fearing that the blood flowing from a cut finger would harm those who came near her. Later, dressing, walking out of doors, eating, were all greatly interfered with through the same morbid ideas. She feared contagious disease because she might communicate it to others. The insistent idea changed from time to time, but seemed to spring always from the emotion of fear. She eventually recovered. Hammond cites from King, of Sedalia, Missouri, an interesting case of pyrophobia in a boy of ten years old. Day and night he was infested with fear of this kind. On one occasion when the morning was cool he succeeded after a contest with his mother in opening the stove door and pouring a bucket of water over the fire. He is said to have been cured by quinine, the bromides, and the use of evaporating applications to the head.

A boy, eleven years old, developed what was practically a pantophobia, although his disorder exhibited itself chiefly aa a pathophobia, or fear of disease. He was kept almost constantly in the hands of physicians. Sometimes his morbid ideas revolved around real affections of slight importance; sometimes his fears and suffering were due purely to morbid conceptions and insistent ideas. Now his eyes were the source of morbid dread, and soon his limbs were the seat of rheumatic pain; he narrowly escaped, after solemn consultation, a laparotomy for 'typhlitis,' a case of strange metastasis, as the typhlitis was probably in his head. To a moderate degree he suffered from mysophobia, spending unusual time at his ablutions, teeth cleaning, dressing, and in the care and arrangement of his clothes. Anything in the nature of a symptom or a disease mentioned in his presence was likely to take possession of him. His morbid notions and apprehensions were fed and encouraged by the unceasing attention of members of his family. He was the only son of a widow, and was under the tutelage of a mother, a maiden aunt, and a grandmother, probably the worst board of management for a pathophobic boy that could have been chosen by perverse fate. He was practically cured by taking him from his home surroundings, disregarding his complaints, forcing him to do things on time and after the manner of others, at the same time carefully but not obtrusively looking after the general health.

Another boy, at the age of ten, began to develop the scrupulous and mysophobic type of monomania; in fact, he was, as so many of these cases are, an illustration of an admixture of several of the so-called classes of morbid fears. He was constantly worrying about many things that he said and did in his intercourse with others. If left alone, he would spend hours in bathing and washing himself; and often imagined that he had been polluted or would contaminate others. The symptoms were in many respects like those of the lady described by Hammond, and to whose case he first applied the term mysophobia—who could touch nothing without being irresistibly impelled to wash her hands, and who

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in many other ways was tormented by the fear of contamination. This boy improved greatly under mental discipline, outdoor exercise, and careful tonic medication.

It may be necessary sometimes to separate a form of juvenile dementia the result of inherited syphilis from idiocy and imbecility, whether of syphilitic or other origin, which may commonly be done by the fact that the dementia usually comes on after the child is four or five years old, and therefore when the mental condition has been determined not to have been that of idiocy. In rare cases, it happens that a juvenile or infantile dementia occurs when the child is two or three years old—so young that its true mental status has not been fully determined. With this word of caution as to the possibility of inherited syphilis showing itself in a child otherwise healthy in the first year or two of its life, most of the cases of this form of dementia will be comparatively easy of recognition. A family history of syphilis will often but not always be obtained. Often the upper incisors will be pegged and notched, and cicatrices at the angles of the mouth, and the characteristic physiognomy be present; the child will have attacks of keratitis, chorioiditis, or iritis, or a history of snuffles, or of a rash; and sometimes epilepsy will have developed.

The Evolution of Surgical Principles was the subject of Dr. G H. Hume's address in surgery, delivered on August 3rd before the British Medical Association. In the course of his address, (*Brit. Med. Jour.*) Dr. Hume said:

It is our frequent boast that surgery has become, and is becoming, more scientific, and by an appeal to our results we justify the claim. But the science of surgery—and by the phrase we mean the principles of surgery—is nearly altogether the growth of the century that has followed Hunter's death, and its growth has been by no means one of continuous or steady progress—rather, as is usually the case in the development of scientific truth, it has been by fits and starts. The greater part of the work has been done in our own generation. And now, with regard to much of the art of surgery, it rests on principles so worked out and firmly established that the claim to scientific position can be made good. But with regard to much also we are still only struggling toward scientific truth. In speaking, therefore, of the development of surgical principles I shall endeavor to illustrate both classes—both those principles which, being in a sense perfected, have issued in enhanced success; and those also toward which we are still groping, and by which we have not yet been guided out of difficulty and uncertainty.

The principles of surgery is one of those elastic phrases which carry to our minds a fairly exact meaning, but to which we find it hard to give a concise definition. We certainly do not use it as the equivalent of theory. The surgeon who, thinking himself well versed in surgical principles, and therefore prepared to act in the best manner for the best reasons, would not consider himself justly described as a man of theory. And yet theories which become the motive or suggestion of surgical action are surgical principles, and these may be sound or unsound according to the character of the views upon which they are based. In so far as surgery is applied science, the data from which surgical procedures spring are in the strictest sense scientific principles; and we find that surgery advances by precisely the same methods as all other practical sciences. We have our inventions, our appliances, our practical details upon which an ever increasing ingenuity and industry are expended. We have also sometimes our discoveries in medical or collateral science, which become the inspiration or rallying point of great practical advances. But the phrase covers more even than scientific data. The definite ends or objects of surgical action which are proper under given circumstances belong to the principles of surgery. So also do rules of procedure which the gathered experience of the past and present prescribes or sanctions. The mode of formation of surgical principles is therefore a double one. They may arise like a superstructure upon a foundation of scientific knowledge, or they grow down out of experience to be themselves part of the foundation. They are the mainsprings of action; and so far from being alien to practical efficiency, they are at once its inspiration and guide. One of the not least important surgical principles dictates scrupulous attention to the minutest practical detail; and he who, knowing that a life may hang on the integrity of a stitch, concerns himself anxiously about the method or material of a suture is only acting in faithful obedience to surgical principle.

The mode of growth of scientific principles can find no better illustration than in our modern doctrines of surgical repair. The beginnings of these doctrines may be traced far back in the history of surgery. But it was by Hunter's work and in the pages of that *Treatise on Inflammation*—which, though pondered and labored through many previous years, as was Hunter's way, was not published till the year of his death—that the real beginning was made. Hunter's statement that primary healing takes place without inflammation contains the germ of what we believe and act upon now. It did not, of course, go far enough. It defined the relationship between what was then, as it is now, ideal healing and inflammation, in the sense that no relationship can or does exist between them all. But there is no such definite expression to be found in Hunter's writing with regard to the modes of secondary healing. Hunter, I think, believed, as did most of his successors down to the last few years, that a certain degree of inflammation was necessary for these delayed forms of healing. Indeed, from Hunter's time there was a falling away from the faith, and we find the most philosophical surgical opinion as represented by Travers holding that a 'subdued state of inflammation favors healing,' and that to 'supersede it would effectually retard or preclude' the process of repair.

I am sure, sir, that to many in this audience it may

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seem to demand an apology that I should even mention in their hearing the name of inflammation. I may appear to be abusing my opportunities in carrying them back to their earlier days when inflammation was the bugbear of their surgical studies, a true surgical *pons asinorum*. But I plead in excuse that down to a recent period the ideas of healing and the ideas of inflammation seemed in the very nature of things to be inseparably interwoven. It turns out that they were only needlessly entangled, and ideas which in the time of their confusion belonged mainly to the region of theory have since proved to be matters of the most eminent practical importance. The process of disentangling began in and proceeded with the elucidation of the true nature of inflammation and its consequent suppuration. There was a time when the four classical symptoms of pain, heat, redness, and swelling summed up nearly all that was known of the process of inflammation. Then followed the anatomical era, the time most fruitful of bewilderment to the student, in which, thanks to rapid improvement in the methods of microscopical investigation, attention was concentrated in the blood stasis, the changes in the tissues and in the vessel walls, and on the out-wandering of the white corpuscles. An intermediate stage followed this in which, clinically and experimentally, the suppurative processes were recognized to be infective in their nature. And this culminated on the period in which we now find ourselves when the whole process is demonstrated to be due to the agency of micro organisms. One point, however, remains to be cleared up. Is the febrile access which follows an aseptic operation, sometimes sharp in degree though short in duration, to be looked on as the result of inflammation? There is no ground for supposing it to be an infective process the same in kind and different only in degree from that which always tends to suppuration. If different in nature it should also be distinguished in name, and there is much to justify the proposal to restrict the word inflammation to those changes which result from the action of septic organisms, while the other and simpler process under some such title as traumatic reaction demands further examination for the clearing up of its intimate character. Such a defined use of the term would end the confusion which has hitherto attended the conception of inflammation as a disease, and would rest the idea to which the word corresponds on the sure ground of etiology.

Naturally with the true knowledge of inflammation and suppuration have come clearer and more accurate views with regard to the process of repair. Not alone in primary adhesion but in all forms of healing it is seen that inflammation is never a help, and can only be a hindrance, and that if it occurs repair must take place in spite of it, or be delayed until it has passed away. We have gone back upon Hunter's dictum, only we have given it a more extended, or rather an unrestricted, application. The surgeon's part, therefore, is now not to treat but to prevent inflammation and suppuration, and the practical side of the scientific evolution I have briefly sketched is the antiseptic system.

Mississippi Valley Medical Association.—The nineteenth annual meeting of Mississippi Valley Medical Association will take place at Indianapolis, Ind., October 4, 5 and 6, 1891. President, R. Stansbury Sutton, M.D., Pittsburgh; Vice Presidents, W. N. Wishard, M.D., Indianapolis, W. S. Christopher, M.D., Chicago; Secretary, Frederick C. Woodburn, M.D., Indianapolis; Committee of arrangements, H. M. Lash, M D., O. G. Pfaff, M.D., Theo. Potter, M.D., Geo. W. Vernon, M.D.

The General Sessions will be held in Plymouth Church, southeast corner Meridian and New York streets, at 10 o'clock on the opening morning, and at 9 o'clock on the two succeeding mornings.

The Surgical Section will meet in Plymouth Church.

The Medical Section will meet in Meridian Street Church, southwest corner Meridian and New York streets.

The Section Obstetrics, Gynecology and Abdominal Surgery, will meet in Plymouth Church.

The sections will meet daily at 10:30 A. M., with the exception of the first morning, when there will be no meeting of the sections.

The Registration Hall will be in the Denison Hotel, southeast corner Pennsylvania and Ohio streets, which has been selected as the general headquarters.

The Committee Rooms will be in the Denison Hotel.

The Exhibit Hall will be in the spacious building on the southwest corner Pennsylvania and Ohio streets, directly opposite the Denison Hotel.

ENTERTAINMENT.—Wednesday evening, October 4, the profession of Indianapolis will give a reception and collation in honor of the visiting physicians and ladies at the Denison Hotel.

Thursday evening, October 5, Col. Eli F. Lilly will give a reception.

HOTELS.—Hotel Rates will be from $1.50 to $3.00 a day. The Secretary, Dr. F. C. Woodburn, of Indianapolis, will take pleasure in securing accommodations for any who may desire them secured in advance.

RAILROADS.—Reduced railroad rates may be obtained on the following conditions: Each person must purchase a first-class ticket to Indianapolis, for which he will pay full fare, at the same time requesting the ticket agent to furnish him with a certificate of such purchase. This certificate will be signed by the secretary of the meeting and viseed by the agent of the Central Traffic Association, which will entitle the holder to a return ticket at one third the regular rate of fare.

Tickets should not be purchased earlier than three days before the meeting. Tickets are good three days after the adjournment of the meeting.

Be sure to ask the ticket agent to furnish you with a certificate, as no refund of fare will be made because of failure to obtain one.

President's Address—Fibroid Tumors of the Uterus, R. Stansbury Sutton, M.D., Pittsburg.

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Address on Medicine. Jas. F. Hibbard, M.D., Richmond, Ind.

Address on Surgery—The Anatomy and Surgical Treatment of Inguinal Hernia in the Male. Henry O. Marcy, M.D., Boston.

A great many papers have been announced and judging from their titles the meeting promises to be very interesting.

The Indian Territory Medical Association.—At the next regular semi-annual meeting of this association at Muskogee, Ind. Ter., Thursday and Friday, December 14 and 15, 1893, the following programme will be presented:

Cerebro Spinal Meningitis, J. C. Robinson, McAlester, I. T.; Discussion opened by J. S. Fulton, Atoka, I. T.

Enteritis, G. R. Rucker, Eufaula, I. T.; Discussion opened by Oliver Bagby, Vinita, I. T.

Miner's Fever, L. C. Tennant, McAlester, I. T.; Discussion opened by M C. Marrs, Claremore, I. T.

Laceration of Cervix Uteri, D. H. Burke, Webber's Falls, I. T.; Discussion opened by C. P. Linn, Claremore, I. T.

Uterine Displacements, M. F. Williams, Muskogee, I. T.; Discussion opened by L. A. Hamilton, Pryor Creek, I. T.

Osmotic reatment of Uterine Inflammation, R. I. Bond, Hartshorn, I. T.; Discussion opened by R. L. Fite, Tahlequah, I. T.

Symphysiotomy, B. F. Fortner, Vinita, I. T.; Discussion opened by M. P. Haynes, Vinita, I. T.

Vesical Calculus, W. H. Harrison, Webber's Fall, I T.; Discussion opened by J. R. Blakemore, Muskogee, I. T.

Osteo-Myelitis, H. B. Smith, McAlester, I. T.; Discussion opened by E. N. Allen, McAlester, I. T.

Fistula in Ano, P. Donahoo, Afton I. T.; Discussion opened by O. B. Thompson, Atoka, I. T.

Surgery of the Prostate, J. C. Gunby, Sherman, Tex.; Discussion opened by B. Hatchett, Ft. Smith, Ark.

Ocular Headaches, H. Moulton, (Specialist) Ft. Smith, Ark.; Discussion opened by T. N. Taylor, (Specialist), Sherman, Tex.

Cataract, F. B. Tiffany, Kansas City, Mo.

Voluntary Papers Solicited.

F. B. Fite, President, Muskogee, I. T.; Oliver Bagby, Secretary, Vinita, I. T.

Death of a Medical House-Officer.—Another sad case of death during hospital duty is reported from London. Mr. Arthur Durham, a brilliant graduate of Christ's College, Cambridge, and of Guy's Hospital, died August 11, while on duty as medical house officer at the London Fever Hospital, after an illness of only four days, from virulent diphtheria contracted from a patient.

NOTES AND ITEMS

A Gift from Professor Czerny.—Dr. Czerny has sent a contribution of twenty dollars to the Gross Monument Committee, as a mark of his "admiration for the man and the surgical work which he has done."

Dr. W. H. Galt, for years City Health Officer of Louisville and a member of the Faculty of the Louisville Medical College, died September 14, in that city, of erysipelas. He was 65 years of age. Dr. Galt was prominent as a health official, and was known in all the larger cities.

The Johns Hopkins Medical School.—Johns Hopkins University will open its new medical department next October. The regular course in this school is to be four years, and women are to be admitted on the same footing as men, and on the same conditions; a collegiate degree or evidence of an equivalent education.

Dr. Henry B. Millard, the eminent medical authority and one of the foremost physicians of New York, died in Paris, France, September 14, of typhoid fever. He was on his regular annual trip abroad and was about to return home. Dr. Millard's most lasting production was "A Treatise on Bright's Disease," published in 1884. He was a specialist in that disease.

Distinguished Visitors.—The profession will be surprised to learn that Drs. H. Knapp and Helmholtz, the inventors of the ophthalmoscope, recently made a meteoric visit to this city. On the morning of Tuesday, the 12th inst, the arrived from Denver, Col., in company, and having spent the day in St. Louis, they, in the evening continued their journey to New York. Their presence was, so far as we have learned, revealed only to Dr. James P. Parker. We regret their tarry was so short, for the profession would in some suitable manner have honored these *luminaries* in ophthalmology of two countries, had opportunity been afforded by prior information of their proposed advent and the tarry of even a few days in the city. D.

A Case of Supernumerary Spleen.—Surgeon G. Harry Younge reports the following case in the *British Medical Journal* (*Med. Rec.*): Private M. D— was admitted into the Station Hospital, Malapuram, March 28, 1893, suffering from enteric fever. From the first the range of temperature was very high, and the symptoms very severe. He died April 4, from hyperpyrexia, his temperature at the time of death being 108° F. The post-mortem examination showed unusually deep and extensive ulceration of Peyer's patches and the solitary glands, several of the ulcers varying from one to one and a half inch in diameter. There was hypostatic pneumonia of both lungs. The left lung

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was firmly adherent to the parietes and diaphragm over its entire surface. A mass of calcified tubercle as large as a hazel-nut was found in its apex. The spleen weighed fifteen ounces, and was congested and friable. Lying almost in contact with its lower border was a supernumerary spleen. The latter was one and a quarter inches in diameter, was perfectly circular in shape without any attempt at a hilum, was attached to the spleen by a distinct fold of peritoneum, and was supplied by a special branch from the splenic artery. On being cut into it presented the usual appearance of a spleen which was congested and friable.

Charity-Organization.—All who are interested in charity-organization, the proper distribution and use of alms, the sanitary improvement of the poor, the proper relations of the hospitals to the community, etc., should procure a copy of the Fifteenth Annual Report of the Charity Organization Society, of Buffalo, N. Y., a pamphlet that shows what noble efforts are being made and what splendid success is being achieved in the special fields chosen. Every city should have such a society, and physicians should be leaders in the movement.

Congenital Absence of Nails.—Dr. Herman Eichhorst reports in the *Centralblatt f. Klinische Medicin* of April 8, 1893, the case of a man, twenty-six years of age, who had no nails on either fingers or toes. The nail-bed and fold were well formed, and the former presented a shiny surface, giving the appearance of a very thin nail. Close examination, showed, however, that there was not the slightest trace of a nail. the skin of this part being softer and more delicate even than the surrounding integument. Sensation was also as acute here as on the palmar surface of the fingers. The man's hair and teeth were perfectly normal.

Acute Nephritis after Vaccination.—Perl (*Berliner klin. Wochenscr.*, No. 28, 1893, p. 674) has reported the case of a child, two and three-quarter years old, which was vaccinated for the first time. The child had been rachitic, slow in learning to walk, and had suffered a great deal with eczema, but at the time of the operation it was in perfect health and well nourished. Four days later the little one became restless, complaining of pains in the abdomen and back and appearing feverish. On the following day vesicles were visible at the site of vaccination. It was also noticed that the urine was scanty, turbid, brownish, and deposited a heavy sediment. On examination, its specific gravity was found to be 1016, and albumin in the proportion of 1·2 per cent was detected, together with blood coloring matter. Microscopic examination disclosed the presence of red and colorless blood-corpuscles and numerous hyaline, epithelial, and blood tube-casts. With rest in bed and a milk diet these manifestations disappeared in the course of a week, and the child recovered perfectly. The vaccination pursued its usual course. Three other children that were vaccinated at the same time presented no abnormal manifestations.

The Administration of Anesthetics.—The following deductions (*Lancet*, No. 3642, p. 1498) have been arrived at by the Commission appointed by the *Lancet* to investigate from a clinical standpoint the subject of the administration of chloroform and other anesthetics: The death-rate under anesthetics has heretofore been unduly high, and may be lowered by improved methods and greater care. Ether is the safest anesthetic in temperate climes for general surgery, when properly given from an inhaler permitting graduation of the strength of the vapor. Nitrous oxide gas should be employed for minor surgery. Chloroform is a comparatively safe body when given by a carefully trained person, but is not in any case wholly devoid of risk. No age or nation is free from danger under anesthetics. The perils of anesthesia, however slight, demand that the undivided attention of a duly qualified and trained medical man should be given to the administration of the anesthetic.

Suggested Cremation of the Remains of Consumptives.—At the recent International Congress on Tuberculosis, one of the questions discussed was the necessity for the obligatory cremation of the remains of consumptives (*Med. Times and Hosp. Gaz.*). Earthworms, it was urged, bring to the surface the bacilli which infest the dead body, and in dry weather they may be inhalee in the form of dust. This, it is suggested, is the reason why the health resorts of the South of Europe are centres of tubercular contagion. Doctors Lortet and Depugnes, of Lyons, related cases of such infection, and described experiments they made which led them to demand obligatory cremation. They mixed the sputa of consumptives in earth, which they placed in pots. A month later the earthworms in them were tubercular, and the earth they passed through communicated the disease to animals. Other experiments were made by placing earthworms on graves where bodies of those who had died from consumption had long laid, and it is said the results were confirmatory of the possibility of contagion being conveyed in this manner.

Migraine with Recurrent Palsy of the Third Nerve.—At a recent meeting of the Ophthalmological Society of the United Kingdom, Snell (*Brit. Med. Jour.*, No. 1698, p. 118) reported two cases in which attacks of migraine were attended with paralysis of the third nerve. One case was in a man, twenty-seven years old, who had had attacks of migraine from the age of ten years, during the last seven of which the eye had been closed in the attacks. These occurred at first at intervals of about eight weeks, but subsequently every two or three weeks, and lasted three or four days. The palsy of the third nerve was practically complete, there being ptosis and paralysis of the ocular muscles,

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including dilatation of the pupil and palsy of accommodation. The attacks commenced with vomiting and headache. In the intervals between attacks the ocular palsy did not entirely disappear, the drooping of the lid growing progressively more nearly permanent. The second case was in a girl, eighteen years old, in which two attacks of palsy occurred at intervals of four years, though outbreaks of migraine in the interval. On each occasion recovery was perfect. The affection is always to be monocular. The rapidity of recovery seems to bear an inverse ratio so the length of interval.

The Eucalyptus and the Mosquito.—A correspondent of *Insect Life*, who is the owner of one of the largest and oldest groves of eucalyptus globulus in his part of California, says that for fifteen years he has had opportunities to observe those trees as repellants of insects (N. Y. *Med. Jour.*). Over thirty years ago his attention was first called to the subject by a physician who had resided in Australia for some years. That physician assured him that the mosquito, so troublesome to Californians, was unknown in the Australian eucalyptus forests and swamps, but added there's a "spotted mosquito" nearly as bad there in some places. He, not being an entomologist, was unable to tell whether the "spotted mosquito" was a species of the genus Culex, or of some allied genus. The physician was evidently a good, close observer, and the writer considered it worth his while to take the hint. He adds: "I determined to test the anti-mosquito qualities of the eucalyptus, so when I began to improve my house here nineteen years ago, one of the first things I did was to get a lot of eucalyptus seed from Australia and plant out a grove of the trees. The tallest of them are now over one hundred and forty feet tall, and can be seen for twenty miles around. My house stands in the midst of these trees. My irrigating ditch, a dozen feet wide, of sluggish current, runs through the grove beside the house. There has never a single mosquito larva been seen in this ditch from where it enters the first shade of these trees to where it emerges from them two hundred yards away; while above and below mosquito larvæ are plentiful—not immediately below, but some hundreds of yards away, where the water stands in pools and becomes stagnant among a growth of black walnuts and cotton-woods. My live stock pasture in this timber, going into the walnuts and back again under the eucalyptus shade at pleasure. Frequently when the cows come up at night they bring a swarm of mosquitos; occasionally some of them get into the house, but cause us so little annoyance that we scarcely notice them. Before this ditch reaches the eucalypti it runs through a jungle of 'fence bamboo,' where the mosquitoes are so bad that we avoid working there except on the windiest days. And, though the ditch has more currents there, the larvæ of mosquitoes are plentiful in the water till it reaches the eucalyptus trees, below which point none are found, till it has become stagnant away below them."

Admission of Women to the British Medical Association.—In accordance with a resolution passed last year, the British Medical Association has amended its by-laws granting membership to women-physicians, as they are called in England "*lady-medicals*."

A New Medical School in Boston.—The trustees of Tufts College have decided to establish a medical department. The new school will be located in Boston, and will be opened next October, to men and women on the same footing. Albert Nott, M.D. is the Dean, and Charles P. Thayer, M.D., the Secretary.

A Suicidal Epidemic.—An unusually large number of suicides has been reported this summer, both in this country and in Europe. London, Paris and Hungary are especially afflicted. Many of the cases have had no discoverable reasons for their occurrence. The usual conditions of long-continued, dark, wet weather said to cause an increase of suicides have certainly not been present this year.

Menstruation in a Child Aged Six.—Jacobovitch (*Nouv. Arch. d' Obstet. et de Gynec.*, Supplement, June, 1893) related this case before the St. Petersburg Society for Diseases of Children. At the age of three she was brought to Jacobovitch for hemorrhages. The genitals were normal. A considerable amount of a milky fluid exuded from the breasts, which were of the size of hen's eggs. The child is now over six years of age. She menstruetes several times yearly, especially in summer. The period lasts from three to four days. Before the catamenia the child becomes ill-tempered; afterwards she has headaches with vertigo. She is very anemic. The breasts are as large as small oranges; the labia minora and clitoris slightly hypertrophied.—Boston *Med. and Surg. Jour.*

Results of Modern Medicine.—At the Glasgow University medical graduation ceremony last week a valedictory address was delivered by Professor McKendrick, who dealt with the development of the medical art during the last thirty years. In concluding the Professor said that the total result of the progress of medical science during the period in question might be briefly summed up thus:

1. Thousands of lives saved annually by preventive medicine.

2. Greater accuracy in diagnosis, and a sounder knowledge of the natural history of disease.

3. More rational treatment.

4. Many diseases caused to pass through their stages more speedily, thus saving time.

5. Better means of relieving pain and suffering.

6. Making disease, even when incurable, more tolerable, and at last smoothing the passage to the Elysian Fields.—*Med. Times and Hosp. Gaz.*

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Asthma.—The addition of five grains of Iodide of Potash to one drachm of NEUROSINE will effect surprising results in Asthma and often cure permanently if persevered with for a sufficiently long period. See ad.

A Road Cart is one of the most popular vehicles with the doctor and what he requires is something strong and durable. That made by D. F. Sargent includes, in addition to these qualities, elegance and cheapness. See ad page.

Pelvic Cellulitis is a common and serious malady. The treatment we must have in view is to bring about an altered condition of these parts and we know of no more reliable remedy to accomplish this than the "Elixir Six Iodides" (W. G.'s). See ad.

Tritica.—The Searle & Hereth Co., Chicago, Ill. Gentlemen—Your sample bottle of Tritica was received and I cannot say enough for it. The one sample cured a chronic case of cystitis in a remarkably short time. In fact all the other medicines the lady had taken for eight years seemed to do her no good until she got Tritica, which cured her. Please accept thanks for your liberal sample.

G. D. COUCH, M.D., Newton, Ga.

With the Pure Hypophosphites of Lime and Soda you can score success time and again. The results are gradual, steady and certain if the remedy is preserved with faithfully, until the cure is complete. None but chemicals of known genuineness and absolute purity should be used. McArthur's Syrup is prepared on the principle laid down by Dr. Churchill. It contains the chemically pure hypophosphites of lime and soda, uncomplicated with other drugs, in a pure and wholesome syrup. If you would like to study this subject more closely the McArthur Hypophosphite Co., Boston, Mass., will send you, free. a pamphlet on "The Treatment and Curability of Consumption."

The Second Edition of A Treatise on Ophthalmology for the general practitioner, by Adolf Alt, as announced in the columns of the REVIEW, is now ready. The manner in which the first edition has been received by the profession rendered a new edition necessary soveral years ago. This edition is considerably enlarged and is a useful guide and help to the general practioner who may be forced to take care of certain eye diseases. Illustrations of eye instruments (as every instrument makers' catalogue contains them) have been eliminated and a large number of practical illustrations have been added. The work contains 346 pages and will be mailed postpaid on receipt of the price $3.50. J. H. Chambers & Co., Publishers, St. Louis, Mo.

Leucorrhea.—This name applies to all non-hemorrhagic discharges from the female genital organs that are more profuse than is deemed natural or healthy, in order to obtain relief consider first the cause of same. In nine cases out of ten the entire genital tract is at fault, therefore it becomes necessary to administer such remedies internally as will tone up the uterus and appendages and not rely upon internal applications which cannot give any permanent relief. This is the experience of many of our best physicians who make a specialty of treating female diseases. While the medicinal effects of DIOVIBURNIA is a sure remedy for painful dysmenorrhea being the most powerful uterine tonic attainable, the medicinal effects are perceivable in all disarrangements of weakness of the uterus and appendages. It will also entirely relieve leucorrhea which is simply an indication of a disease pertaining to the uterus and appendages, toning up the entire system as well. See ad.

The Walker-Green Pharmacal Company has already established itself in professional favor although a comparatively new firm. The claims made by it for the purity of its products seem to be well sustained by practical experience. See ad page.

Wheeler's Tissue Phosphates is the name of an excellent preparation which is a real builder of the tissues. Since it was first made by Mr. T. B. Wheeler it has undergone ample trials and the results achieved by it have given universal satisfaction. See ad on page.

Electricity is playing an important part in modern therapeutics and electro-medical instruments are among the valuable additions to the physician's armamentarium. The Waite and Bartlett Company manufactures a full line of the most approved patterns and should be consulted before purchasing elsewhere. See ad on page.

Cod-Liver Glycerine.—She Superintendent and Surgeon in charge of the St. Louis Hospital, Dr. H. Marks, announces that Cod-Liver Glycerine is now used in that institution. Its power to mix uniformly in any proportion, in all prescriptions, or to mix with water and spirits without separating on standing, renders it the most desirable reconstructive in the convalescent period of difficult surgical cases, or acute diseases attended with emaciation; while its digestive properties insures its therapeutic action. See advertisement.

Sennine, the New American Antiseptic, Non-Poisonous. Non-Irritant, Odorless, is a Product of Boracic Acid and Phenol.

Convenient, Inexpensive, Applicable in Powder Form, and Dressing. One ounce dissolved in boiled water makes one quart of liquid of proper strength.

Externally, Five parts of SENNINE dissolved in 100 parts boiled water, will be of desirable strength for an antiseptic surgical wash, and for the treatment of catarrhal affections of the mucous membrane of all parts of the body. An Excellent Dressing for Burns, Scalds and Sores is obtained by mixing one part with ten parts of Vaseline.

Internally, one to five grains of SENNINE three or more times a day, is a powerful remedy in Fermentative Dyspepsia, Typhoid Fever, Cholera Infantum, Cholera Asiatica (especially as a rectal injection, five per cent), and other fermentative diseases of the stomach and bowels.

We Call Our Readers' Attention to the advertisement on page 10 of Robert Hannahs great picture of Dr. Harvey demonstrating to Charles I. his theory of the circulation of the blood. Mr. Harvey, the discoverer of the circulation of the blood, was born at Folkstone, in Kent, England, on the 1st of April, 1578. He passed five years at the then most celebrated school of medicine in the world, the University of Padua, Italy, where he received his diploma as doctor of medicine in 1602. He settled in practice in London, where, 1609, he was appointed physician to St. Bartholomew's Hospital, and in 1615 Lumleian lecturer at the College of Physicians, an office then held for life; and it is generally supposed that in his first course of lectures (in the spring of 1616) he expounded those original and complete views of the circulation of the blood with which his name is indelibly associated. Shortly after Harvey's election as Lumleian lecturer he was appointed physician extraordinary to Charles I.

The picture represents the sovereign as witnessing the dissection of a doe, of which he placed many at Harvey's disposal while the anatomist was prosecuting his investigation into the subject of the circulation of the blood.

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ORIGINAL ARTICLES

Antisepsis and Antiseptics.

II—HISTORY.

BY CHARLES MILTON BUCHANAN, M.D.,

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[CONTINUED.]

To quote the words of Dr. Pepper, in his presidential address to the Pan-American Medical Congress so recently convened at Washington, D. C.: "Modern medicine has made more progress in the past twenty years than in the whole of the twenty centuries preceding them!" Hence we can expect no remarkable strides in the history of antisepsis in the earlier days—nay, even centuries—of even civilization itself. Indeed, positive advancement would be impossible without the invaluable aid of the microscope, upon whose precision and certainty all modern progress in such direction is based.

In the seventh century after the inauguration of the Christian era Paul d'Egineta lived and flourished. He condemned all measures used by physicians which tended to hinder the action of Nature. He also declared that we must attribute to Nature herself the successive changes presented by wounds in the process of repair. This is a distinct advance when compared with the previous opinions that a physician possessed and could exercise a modified form of creative power in the treatment of wounds and traumatisms.

Medicine, as was all learning, was plunged into the utter darkness of the ignorance and superstition of the so-called Dark Ages, only to revive in the Renaissance. Consequently it was nearly seven hundred years before even a faint glimmer of light pierced the Cimmerian darkness. The thirteenth century witnessed the birth of Rogerius, of Lanfranc and of Bruno, each one of whom bears an important relation to the development of those ideas which have culminated in modern antisepsis and asepsis. Rogerius vigorously protested against the use of any dressing which would antagonize in any way the natural operations of repair; he used only wine and honey, as local applications. Bruno instituted the practice of closing all incised wounds at once; wounds with loss of substance he caused to suppurate, unless the nerves were injured—*in which case he was afraid that putrefaction might cause spasm!* Here we have a dim but certain appreciation of the reparative influence of the process of granulation, but, still more wonderful, a most accurate hint at the etiology of tetanus as elucidated by the science of to-day.

During the next two centuries, the fourteenth and the fifteenth, the obsolete methods of practice were almost wholly continued; in fact, this period was marked by little or no advancement of any value or practical importance.

De Vigo, in the fifteenth century, first enunciated his false and pernicious doctrine as to the poisonous nature of gunshot wounds. Noticing the frequent infection of open and exposed wounds, he ascribed the effects observed to the presence of air and declared that access of air to the wound was, *per se*, highly objectionable. He made use of various powders as dressings, some of which were undoubtedly antiseptic in their nature,—not that he knew of the presence and existence of such germs as cause putrefaction, or the germicidal virtues of such agents as he used, but that empiricism, experience, had taught him that benefit followed their application.

In 1542, Michel Ange Blondus discarded all of the surgical dressings in use at that time and advocated the use of water for such purposes. After arresting hemorrhage and removing foreign bodies he applied dressings which were soaked in water.

From this period begins the real history of the beginnings of modern treatment. The two most influential persons in laying the foundation of such methods were Paracelsus and Pare. Phillipus Aureolus Theophrastus Paracelsus Bombastus was born at Einsiedeln, near Zurich, the year following the discovery of America—in 1493. He spent the early part of his life as a teacher of surgery at Basle. In the treatment of wounds he aimed solely at *aiding*, and not combating, Nature. He strenuously insisted that Nature alone was competent for the task of repairing wounds, that non-interference was the best policy. He believed in the existence of a

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juice in the body which kept the tissues in health and in proper repair when injured. In his opinion the office of the surgeon was to prevent any alteration in this liquid, which might result from contact with the air or other accident. He thought that Nature was usually sufficient for this, as was to be seen in the wounds of the lower animals,—the essential thing, he declared, was non-interference with Nature. His use of medicaments was only for the preservation of this juice and the prevention of its corruption or putrefaction. It is known that he made use of silver wire sutures and bathed or injected wounds with a solution of Plumbic acetate (Liquor Satu

Ambroise Pare (1509-1584) adopted these views. He mentioned a number of topical applications; his great aim was to keep the part at rest. Jeannel, in his work "*De l'Infection Purulente*," quotes passages from Pare which show that he attributed the fever which accompanies wounds to a putrefaction of pus. He was thoroughly impressed with the fact that the office of the physician was to assist Nature, for he says: "Or ceste premiere et generale indication est parfaite par nature comme le principal agent, et par le chirurgien comme ministre de nature; et si nature n' est forte, le chirur gien ne pourra venir a sa fin pretendue." Moreover, he looked upon *pure* air as beneficial to a wound and to the patient; but the air of sick-rooms and camps he declared to be loaded with miasms and therefore very dangerous, —*it is the miasms in the air rather than the air itself which prove dangerous, he concluded.* This was a remarkably accurate, though crude, statement of the basis of antisepsis and modern antiseptic treatment three hun dred years before its birth! Thanks to the writings, teachings and influence of these two men, old ideas began to give way to the newer and truer view that Nature is the only healing power and that all that human skill and knowledge can do is to remove anything which interferes with the natural operations of repair. Pare looked especially to the constitution, strengthening it and removing local disturbing causes in accordance with the time-honored teaching of "*Tolle causam.*"

Jean Andre Delacroix (1573) was one of the most successful surgeons of his time; he adopted, to a certain extent, the views just related in regard to the powers of Nature and the office of the physician. He used antiseptic substances largely, indeed he strongly recommends such mild antiseptics as the ethereal oils and alcoholic substances. After arresting hemorrhage and removing foreign bodies, it was his custom to wash a wound with a detergent liquid and then apply plasters composed chiefly of pitch and oil of turpentine. The results which he obtained by his methods were exceptionally good.

Francois Arcaeus (1574) simplified exceedingly the existing surgical methods, indeed his was the simplest of methods; it is remarkable for its close approach and likeness to the modern procedure. After arresting hemorrhage and removing foreign bodies he washed the wound with alcohol or wine and myrrh and then secured coaptation by means of sutures—*leaving an opening, if necessary, which was kept patulous by means of a piece of lint.* He then applied a balsamic preparation. Here we have the first practical and successful attempt at systematic drainage of wounds. The methods of Arcaeus gave remarkable results—indeed, it is really a fair antiseptic method and is not far removed, in its general principles at least, from our modern idea of an aseptic one.

Wurtz (1596) lived in terror of what he believed to be the contaminating influence of air upon wounds. So far did he carry his fear of his bugbear that he kept the door of the sick-room tightly fastened while he changed the dressings as rapidly as possible.

Near the end of the sixteenth century Vicary made use of balsams and balsamic preparations for dressings and with excellent results.

The greatest and chiefest advances made during the sixteenth century were the reassertion, in no uncertain tones, of the part played by Nature as the principal agent and healing power in the process of repair, the relinquishment of all idea as to the power of the physician in *making* flesh or tissue and the abandonment of the idea of "feeding" wounds. We note, during this period, the first recommendation to apply antiseptic substances to wounds; this was the result of the observation of the success attendent upon the use of such agents, as in the case of the balsam of Arcaeus which acquired great fame. It was during this century that the first declaration of the infectious nature of air, or its constituent impurities or contaminations rather, was made; also the first crude and somewhat grotesque attempt to exclude air and its infectious principles from wounds. We observe also, at this time, the first attempt to drain wounds of the morbid products and secretions upon which pyogenic and pathogenic microorganisms flourish. Such methods were, of course, largely the result of either chance, shrewd observation or empiricism for there was and could be no correct knowledge of the principles involved in such practices or in the attainment of such results—in other words, lacking scientific precision and devoid of scientific armamentaria, systematic observation and study was almost an utter impossibility, hence the only recourse was empiricism and observation. Paracelsus, though correctly named Bombastus, rendered an incalculable service to medicine when he so scathingly denounced slavish adherence to old and obsolete methods of practice; he was among the first to assail, with dauntless intrepidity, the very teachings of Aristotle and others whose opinions and doctrines had prevailed for centuries—he was a revolutionist of a most pronounced type. Thanks to him, many obsolete procedures were sent hurtling into the abyss of chaos and oblivion.

Magatus (1616) is among the first whom we note in the dawn of the seventeenth century. He thoroughly appreciated and insisted upon the importance of rest in the treatment of wounds. He revived the doctrine of the evil effects of air upon wounds; he claimed that the

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air was full of miasms which affect the parts with which they come in contact. This was indisputably proven, he thought, by the fact that a punctured egg began to decay immediately. Hence, acting in accordance with his beliefs, he seldom changed dressings for fear of the contact of air and consequent infection of the wound.

The discovery of the actual existence of micro-organisms may be said to have been made by Anthony Van Leeuwenhoek. In 1675 he observed, by the aid of a single lens, multitudes of animalculæ swarming in a drop of stagnant and putrid water which he had, by chance, placed beneath his glass. This is the very first recorded observation of such organisms and has passed into history as the incident of the discovery of the microbes. This same astute old scientist, in 1683, discovered small, motile bodies in the mucus of the mouth and gave clear and minute descriptions of their appearance and movements; he also discovered the existence of micro-organisms in the feces and in the tartar of the teeth. From his drawings and remarkably clear descriptions of the bodies there is very little reason to doubt that he saw what are known to modern bacteriology as bacteria and vibrions. While Leeuwenhoek discovered such bodies he had no idea of the important role which the result of his discovery was to play in the practice of medicine in years to come. Nevertheless his discovery is a most important one, laying, as it does, the first substantial foundation for the subsequent discoveries upon which the whole of the modern practice is founded.

Robert Boyle, in 1676, made a most startling declaration in his "Essay on the Pathological Part of the Physik," it was as follows:

"He that thoroughly understands the nature of ferments and fermentation shall probably be much better able than he that ignores them, to give a fair account of divers diseases (as well fevers as others), *which will perhaps be never properly understood without an insight into the doctrine of fermentations.*" (The italics are mine). When we consider that Leeuwenhoek had made his discovery only a year previously and that no ideas of the connection between micro-organisms, fermentation and disease had, as yet, been promulgated, this statement, so plainly and so unmistakably couched, seems to border upon the marvelously prophetic. Certainly in the domain of surgery, as well as that of general medicine, Boyle's surmise has been more than realized.

Richard Wiseman (1692) was a man of remarkably good views and practices. In the coaptation of wounds he advised the use of no violence. He declared that the process of agglutination is the work of Nature alone; that, since the blood is the natural glue, the physician must take care that it is good and support the patient's strength. He made use of turpentine and cooling and astringent lotions as dressings and sprinkled powders over large wounds.

Sir John Colbatch (1698) made use of an aqueous solution of sulphurous acid; he recommended it as follows:

"It is an excellent medicine, being taken by way of prevention in infectious seasons; and I think if any medicine deserves that name this doth deserve to be called the true prophylacticon."

His *Novum Lumen Chirurgicum*, which appeared in 1704, was a most remarkable treatise—a new surgical light, indeed! He described a medicament which he used which gave results comparable only to the results attained by the true aseptic methods of the present time. Unfortunately he kept its composition a secret and concealed his method also, hence it has become lost to the world although the reliability and accuracy of the results attained thereby are sufficiently attested to insure their truth; furthermore, the graphic description which he gives of the progress of his cases could not have been imagined, at that time, by any one who had not seen and was not practically familiar with the facts. He describes with peculiar accuracy what we now call a typical aseptic course; nor can there be any doubt that he was familiar with the fact of the vascularization of the blood clot and its replacement by new tissue, precisely as has been described by Lister, the modern "Father of Antiseptic Surgery." In his preface he asserts that the methods of former times, and indeed of his very own, were far from the best. He furthermore says, somewhat significantly, that: "The corruption of the nutritive juice cannot be performed without a sort of fermentation and it is the fermentation particularly that, fretting the fibres, causes inflammation in wounds and by entering into the blood and dividing its texture causes symptomatic fevers which frequently prove so fatal." What marvel of a man have we here! What a pity that he saw fit to retain a secret which would have caused his name to ring with praise through every age! The medical profession completely ignored the teachings and results of Colbatch and indeed, ultimately, almost forgot them entirely; so that his brilliant mind and his brilliant work made absolutely no impression upon the history of medical progress.

He also referred to the fact that in all wounds the patient was put on a low diet and, more often than not, blood was taken from him in large quantities, thereby greatly weakening him; he protested vigorously against such a policy, but to no avail.

Neudorfer thinks that Colbatch's powder must have been ammonic salicylate, on account of the smell of roses to which the latter refers. Its action is thus described by its user: "In all incised wounds, where my medicines have been soon enough used and no other application preceded, they are perfectly cured in a few days *without suppuration.*" He also observed the process of granulation and the organization and transformation of the blood clot into new tissue.

In the seventeenth century but little real progress was made by the medical profession. The attempt at exclusion of air from wounds and the insistance upon mechanical rest, which in themselves were not new ideas, were the chief points promulgated. True, we note the discovery of micro-organisms by Leeuwenhoek,

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the remarkable declaration of Robert Boyle and the highly creditable achievements of Sir John Colbatch, all of which transpired in this century, but these were brilliant individual exceptions—not one made a lasting impression upon the medical progress of the time, indeed they were hardly appreciated for more than a century. With these exceptions, the history of the seventeenth century is almost a step in retrogression when compared with the sixteenth century.

This brings us down to the eighteenth century.

[TO BE CONTINUED.]

Hysterical Hemiplegia.

BY W. T. SARLES, M.D., SPARTA, WIS.

As a member of the Committee on Neurology I feel it a duty to assist, but must frankly state my standing as distinctly amateur in this department. The two following cases of pronounced "hysterical hemiplegia," and some of the practical lessons connected therewith, which have recently come under my care, led me to present the same to this Society for the little they may add to this subject.

CASE I.—Miss Ella B., aged 12 years, for the past six years an inmate of the State Public School for Dependent Children at Sparta, came under my professional care for the first time February 27, 1893, on account of supposed "winter cholera." This case with two others taken in like manner and time and who the fourth day were discharged as convalescent, followed a similar attack, the week previous, of six children in an adjoining cottage and who all made rapid and uninterupted recoveries. Two days later, being March 4, I was hastily summoned with the announcement that the patient was found by the side of her bed on the floor and could not use her right arm and leg. Found patient with complete right hemiplegia—no marked nervous symptoms: Patient inclined to sleep easily and as she was quiet and circulation good I left her in care of a nurse with little attention ordered until morning, when I had her removed to a single room in the hospital building on the grounds, where more quiet and better care could be fuanished her.

At this date March 5, I made a test examination assisted by my partner Dr. D. C. Beebe. Found electro-contractility of muscles of the affected side; tongue protruded at times to the affected side, at other times straight; facial muscles not affected, but at times appeared so to a degree; temperature 102.1°; pulse 100; pupillary reaction normal; patellar tendon reflex of affected side subnormal; muscles of chest not affected; muscles of right arm and leg completely paralyzed as regards motion, but not seriously as regards sensation; marked venous congestion; sluggish capillary circulation and subnormal temperature of affected arm and leg; mind clear, but some hesitancy in speech; patient lay on her back, inclined to the affected side; bowels somewhat constipated at this time, following her diarrhea and vomiting of a few days previous; functions of bladder normal; has menstruated twice, the second time during this attack, but without pain or apparent abnormal appearances either time.

Doctor, what is your diagnosis and prognosis of this case? I asked of my counsel, who answered, that it was evidently organic in character, caused presumably by a lesion of the internal capsule of left side of brain, and that the patient would soon die. I had assumed the position that no organic lesion of the brain or cord existed, but that the case was one of pronounced "hysterical hemiplegia," and ought to recover, but as I had discharged her cured with others but two days previous and now she was helplessly paralyzed, I was more ready to concur than to disagree with honorable and learned counsel. At this juncture my counsel tersely remarked he believed me half right as the "hemiplegia" was evident to a blind man, but where was the history of any "hysteria." I give this bit of conversation to show how perplexing these recent cases are to two general practitioners who see the same case at the same time, but in directly different light as regards diagnosis and prognosis, two essentials in any given case.

March 6, I was again hastily summoned with the statement that patient was having convulsions and was likely soon to die. I now felt the weight of my counsel's position in the case and would easily have been made to concur without further argument, but arriving at her bedside found her first calm, then in a hysterical condition, laughing and crying almost simultaneously, with muscular twitchings of unaffected side. The nurse alleged: "patient straightened out stiff with well side and that the affected side jerked violently during her convulsions," which had ceased before my arrival. I ordered the use of codeine and pot. bromide for producing quiet, and the use three times daily of $^1/_{60}$ gr. strychnine and $^1/_4$ gr. aloin, and rubbing of the affected arm and leg with alcohol twice a day. I now felt confident that the character of the hemiplegia was hysterical without doubt.

March 20, the sixteenth day following her attack of hemiplegia and during which time her right arm or leg had never moved a muscle voluntarily, either awake or asleep, I commenced the daily use of electricity, using the faradic battery, secondary current, to arm and leg.

March 24, slight voluntary movements of muscles of arm began and March 25 the same of leg asserted themselves. April 1, patient walked down stairs to the dining room below, unassisted, and at this date April 4, just one month from date of complete hemiplegia patient has normal use of right arm and leg, and is up and about in her usual health.

CASE II.—A woman 34 years of age, married and the mother of two children. Nearly two years ago patient came to me with a lacerated cervix uteri and much alleged nervousness, the laceration being of some four years standing. I repaired the cervix which healed favorably, and following this, patient had a "hysterical

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bladder." During my absence patient fell into the hands of a neighbor physician for treatment for this latter trouble and being treated on the plan of inflammation, douchings, etc. of that organ, she became rapidly worse, but withdrawing all direct treatment and with no special treatment she suddenly recovered from same. This was followed by "aphonia" which recovered largely after a short period of "placebo" treatment, then followed hysterical cough. Finally, about nine months ago, patient developed right incomplete hemiplegia, manifestly hysterical in character, but which defies all treatment at my command, but which I expect to see suddenly disappear some day as her other hysterical lesions have done. Previous to my knowledge of this patient her local physician having exhausted his patience if not skill with the case, referred the matter to her husband who took upon himself the duties of physician and at times of her "hysterical spasms," would either throw her in a snow bank or deluge her with water, and as he alleges with perfect results. However I never have used such radical treatment, and am not a believer of many of the methods advised as "cure" for "hysterics" and a "balky horse," which in reality are quite alike, as advised by some pseudo medical authorities.

The practical lessons to me in these two cases are first, that among a number of cases of apparently like character in the same ward or household, one of entirely different character might be classed with those in general and a false and erroneous diagnosis and prognosis given, and the embarrassment of the physician be in degree according to the station, and circumstances of the case. Second, that when you get a case of hemiplegia in a young or middle-aged at least you cannot be warranted in giving too hasty a diagnosis and prognosis, for often the best directed skill and observation will be unable to immediately arrive at the proper solution of the case. In the two cases just cited, the one complete, and apparently in the beginning organic in character, recovers rapidly and permanently, while the incomplete case remains as such after months of reasonable care and treatment. The third, and to me important lesson, is, that when you find a nervous and hysterical woman suffering from lacerated cervix, which you believe to be the cause of her reflexes and as Prof. Fred. Byron Robinson says, is troubling her "abdominal brain" you are justified in repairing the same, but you must not tell her to expect a speedy recovery, nor need you tell her she will have "hemiplegia," but don't feel disappointed if she does, and don't make her feel disappointed if she is at least one half as long recovering her nerve equilibrium after the operation as she has been in neglecting to have the same performed.

The literature upon this subject of "hysterical hemiplegia" is not very exhaustive. Authorities give the left side as the one chiefly affected and that paralysis of sensation rather than motion is present in greatest degree. In the two recent cases in my limited experience the right side has been the one affected, and motion has been greatly in excess of sensation in degree of paralysis. Certainly the simple reporting of these cases, not by the general practitioner, which do not seem to harmonize with existing statistics, will assist the specialist in giving to us a more reliable and accurate class of literature in the several departments of medicine and surgery, and in none more needful at present than that of neurology.

Vaseline in Certain Affections of the Middle Ear.—Dr. Delstanche (*Le Bulletin Medical*) speaks highly of injections of liquid vaseline in adhesive affections of the ear. He injects it through the Eustachian tube into the tympanic cavity. It is perfectly innocuous, and from an experience extending over several years he finds it of value:

1. To rupture extensive adhesions of the tympanic membrane with the wall of the labyrinth where insufflation of air, etc., are found insufficient. He has had several cases of partial success with forced injections of the liquid vaseline.

2. To clear out mucous accumulations from the tympanum during the course of certain chronic catarrhs. It forces the mucus into the mastoid cells, where it no longer interferes with hearing, or into the pharynx.

3. To diminish the chances of inflammatory reaction after paracentesis of the tympanum, where the matter filling he tympanum is dense or viscid, and will not evacuate itself spontaneously in a satisfactory manner. Here, from its innocuity, it is to be preferred to any other liquid.

4. To open an obstructed Eustachian tube when mucus blocks it and prevents insufflation of air, a few drops of vaseline blown through the catheter will clear it at once. Hence this simple means is always to be tried before dilatation with sounds is attempted.

5. Finally, in acute inflammation of the middle ear, either with or without perforation, especially in purulent otitis complicating influenza, massive injections of liquid vaseline saturated with iodoform render signal service, from their sedative action upon the atrocious pains which often accompany this affection. They also appear to hasten and aid to a favorable termination.—*Lancet-Clinic.*

Limit the Reading of Papers at Least to Twenty Minutes.—One of the Sections at Washington resolutely resolved to limit all speakers to twenty minutes, no votes being allowed to extend the time of anyone. The result was a series of bright, condensed, and interesting papers, the attention of the audience never flagging and satisfaction expressed by all. Another, perhaps many Sections, gave "courtesy" to one and so courtesy to all (except the listeners), with the result that some writers read for an hour or two, to the great disgust of everybody. And to cap the climax, some of the hour-long papers were in Spanish! In these cases the punishment most excellently fitted the crime.—*Med. News.*

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EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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TO CONTRIBUTORS AND CORRESPONDENTS.

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

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Inflammatory Metastases.

That metastatic processes may occur in consequence of any kind of a local inflammatory focus seems a priori very plausible, and also that such metastases occur quite frequently without even being noticed by the patient or physician—the metastatic foci of bacteria being made inocuous by phagocytosis and the bactericidal properties of the blood serum and, in case of toxines, by absorption into the circulation and excretion by the excretory organs—seems just as natural. When we first learn, however, of an abscess of the brain having been traced directly to a furuecle in the face the case is nevertheless quite a surprise. Among the more frequent inflammatory foci due to metastatic processes we may mention the abscesses occurring in typhoid fever of which it is highly probable that they are due to the absorption of a virus from the intestine. Very rare are those of erysipelas of the skin that occur in internal organs causing an internal erysipelas. With metastases due to tuberculosis and those known as pyemic abscesses we are all familiar.

The bacilli of anthrax, glanders and typhoid fever as well as pneumococci have been demonstrated to pass from the mother to the fetus by the circulation. The inflammatory metastases known as gonorrheal rheumatism are well known. Besides the arthritic inflammations, inflammations of the sheaths of tendons, bursæ, muscles, fasciæ and nerves have been observed in consequence of gonorrhea. In the clinic of Prof. Tarnowski, Russia, Dr. Trapesnikow (*Deutsch Med. Zeit.*, No. 59, 1893), has reported four cases in which, besides gonorrheal arthritis, symptoms due to an affection of the spinal cord were observed: girdle sensation, retention of urine, pains in the spine and extremities, lancinating pains, increased tendon reflexes, sciatica on both sides, altered sensibility and muscular atrophy. The fact that certain metastases occur but rarely in comparison to the frequency of the local affection, the primary focus, may be explained by reason of the resistance offered by the organism to the infecting virus or, as expressed above, by phagocytosis and the bactericidal property of the blood serum.

From these and similar observations we must draw the conclusion that in obscure cases we should never forget to look for primary inflammatory foci, no matter how insignificant they may appear to be, and in every case that comes under the physician's care as complete and exhaustive a clinical history as possible should be taken.

Southwestern Association of Railway Surgeons.

Under the department of Medical Items we publish in this week's issue the announcement of a meeting of the Southwestern Association of Railway Surgeons, which will meet in St. Louis October 26 and 27. The list of officers of the Association under the able Presidency of Prof. F. J. Lutz, furnishes an ample guarantee that the meeting will be one of great importance and interest.

The New Pharmacopeia.

We have just received the new revision of the U. S. Pharmacopeia and note that the metric system of weights is employed throughout without any translation into the old system. This will have the effect of thoroughly familiarizing all druggists with the new system, and physicians will soon feel no longer any hesitancy about using it for fear of a mistake on the part of the prescription clerk. Many physicians, who began to prescribe in the new system ten years ago, have again dropped the custom because they found that some druggists, having to translate the new into the old system—not having the metric weights—would be liable to make mistakes. This obstacle being no longer in the way we feel confident that many physicians, even those that have become thoroughly accustomed to the old system, will now succeed in the effort of using the metric system in their prescriptions.

In the new revision many drugs and preparations have been dropped from the old list and new ones added. Those of the new synthetic remedies which cannot be produced otherwise than under a patented process, or which are protected by proprietary rights have found no place in the Pharmacopeia. The strength of general infusions has been reduced from ten to five per cent of the drug. Material changes in the strength of import-

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ant tinctures have not been made, but in many instances their strength has been more accurately fixed. The number of volumetric solutions have been considerably increased and gasometric analysis added. Several appropriate changes in nomenclature have been made. In giving Chemical formulæ the old notation has been entirely discarded and the work in general is thoroughly scientific and abreast with the times.

The Naval Medical School.

On June 22, the Secretary of the Navy issued Circular No. 52, as follows:

1. The Naval Laboratory at New York shall hereafter be known as the U. S. Naval Laboratory and Department of Instruction.

2. Assistant surgeons shall, immediately after admission to the navy, be ordered to the Naval Laboratory and Department of Instruction for such study and instruction, under prescribed rules and regulations, as may be necessary to familiarize them with the duties of medical officers afloat and on shore.

Appended to the circular were the following rules and regulations:

I.—Assistant surgeons, as soon as commissioned, will be ordered to said establishment and will be required to faithfully perform their duties while undergoing instruction. They will also be furnished with a copy of this circular, and their names registered in accordance with prescribed form contained in book supplied by the Bureau of Medicine and Surgery. This book will be kept on file in the Department of Instruction for future reference.

II.—The course of instruction will continue for a period of at least three months, and will embrace the following subjects:

1. Chemistry, general, analytical, and organic. 2. Hygiene and sanitary science. 3. Microscopy and microbiology. 4. Military surgery and operative work. 5. Clinical medicine and hospital work. 6. Construction and ventilation of modern war ships. 7 Examination of recruits and life-saving methods. 8. Navy regulations, navy ration, hospital fund, pension fund. 9. Keeping medical records at hospitals and on board vessels of war, and blank forms pertaining to the Bureau of Medicine and Surgery.

III.—The director in charge of the U. S. Naval Laboratory and Department of Instruction will assign assistant surgeons to the Naval Hospital, New York, for careful and thorough instruction in the following branches:

Clinical Medicine and Hospital Work: Bedside examination of patients, visiting hospital with medical staff at morning visit, studying and investigating carefully the etiology of disease, as associated with naval life, and the diseases to which sailors are chiefly susceptible, giving attention to and becoming familiar with the technique of the laryngoscope, ophthalmoscope. practice with trial lenses in helping to determine the nature and degree of errors of refraction, thermometer, stethoscope and sphygmograph, preparation of temperature charts, diet lists, etc., as aids to accurate diagnosis, etc.

Navy Regulations, Navy Ration, Hospital Fund, Pension Fund: Navy Ration.—General history of diets, including steps leading to the present recognized principles; general considerations in relation to health and disease, efficiency of force and mortality in time of war; diseases depending upon dietetic deficiencies, with the historical accounts relating thereto; origin of the United States Navy ration, original component parts, with the nutritive and dynamic values and changes at various times, with the effect on values; a study of present United States Navy ration in all relations, including comparisons in nutritive and dynamic values with the rations of foreign navies, and considerations in connection with work done in different climates and parts of ship; spirit ration; condiments; tea and coffee; packing and preserving methods.

Pension Fund.—When established; acts of Congress relating thereto; trustee of pension fund; amounts of pension fund; how invested; those entitled to benefit of fund; sources of income to pension fund.

Hospital Fund.—Sources from which derived, and how utilized.

Keeping Medical Records at Hospitals and on Board of Vessels of War, and Blank Forms Pertaining to Bureau of Medicine and Surgery: Preparation of medical records, embracing all steps necessary to the admission and discharge of patients from hospital, hospital tickets, case papers, reports of medical survey, etc.; also observing carefully the therapeutical indications in each case, general pharmacy, triturates, post-mortem examinations and reports, meteorological observations and reports.

IV.—He will assign Assistant Surgeons to the Naval Medical Examining Board for careful and thorough instruction in the following branches:

Hygiene and Sanitary Science: Embracing the general principles of hygiene, causes of disease, methods of investigation and prevention, vital statistics, first aid to the injured, blood circulation, muscles, exercise, nervous system, contagious diseases, digestion, respiration, organization and duties of health authorities, sanitary jurisprudence.

Water Supply.—Rainfall, flow of streams, storage of water; quantity required for cities and towns, asylums, hospitals, etc.; impurities of water, their origin and nature, whether occurring at its source, in storage, or in distribution, and methods of purification by screens, filter beds, infiltration galleries, chemical processes, etc. analysis, microscopical and chemical.

Air—Composition, its impurities, effect of these on the sanitary condition of cities and towns, hospitals, asylums, public and private dwellings.

Soil.—Methods of studying the topographical and geological features of a district in reference to the effect of the quality and characteristics of the soil upon

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drainage and other sanitary conditions; the location of cemeteries, etc.

House Drainage.—Water supply and drainage of naval hospital buildings and private dwellings; the removal of laundry, sink, and closet refuse; practical elements of plumbing.

Sewage.—Removal and disposal by various methods, including the frequent and systematic removal from cesspools and privies, accompanied by disinfection and deodorization, by the water-carriage system, pneumatic system, etc., to points of its final disposition; the construction of sewers, including combined and separate systems, outfalls, sea outfalls, tank sewers, ventilation of sewers, etc.; final disposition of sewage, garbage, and other refuse by cremation furnaces, irrigation, filtration, chemical precipitation.

Ventilation.—Quantity of air required under various conditions; method of supplying or renewing air by natural or spontaneous means, by artificial means.

Heating.—The various means of heating, by stoves, hot-air furnaces, hot water and steam, and the most practical and efficient treatment of problems arising under various circumstances connected with public and private buildings; the construction of apparatus and the distribution of heat, whether in connection with or independent of the ventilation; the principles of heat and thermo-dynamics, applicable to all constructions connected with heating and ventilation, including boilers, radiators, flow of air through conductors, etc.

Inspections.—Methods of examination of sanitary conditions of public buildings and dwellings and navy yards and stations, and of sewers, drains, and water courses; methods of disposal of sewage and garbage.

Drainage.—The drainage of districts for sanitary objects, surface, and subsoil drainage; drainage of sites for hospitals, dwellings, barns, and outhouses.

Sanitation of Government Reservation.—The construction, care, and management of cesspools, privies, etc., and their disposition with regard to wells and dwellings, care of gardens and yards, with reference to the accumulation and removal of refuse; system of drainage at Navy Yard and Naval Hospital grounds, New York.

Pollution of Streams,—Remedies to be adopted and means of prevention.

Quarantine and Sanitary Regulations.—International, national, State, and interstate quarantine laws; the various measures to be instituted before the departure of vessels from foreign and infected ports; thorough inspection of every part of the ship by medical officer assigned to this duty; medical examination of passengers and crew.

Sanitary Precautions at Sea.—Arrangements and facilities or disinfecting and fumigating ships.

Sanitary precautions to be observed on arriving in port.

Location, character, and construction of quarantine hospitals.

Quarantine regulations with reference to disposal, fumigation, and disinfection of merchandise.

Sanitary administration.

MILITARY SURGERY AND OPERATIVE WORK: Duties of the naval surgeon in relation to care of surgical instruments; carriage of sick and wounded on shore, afloat, embarking, and disembarking, including extemporary transport; preparation for service on board and on shore before action; instruments and supplies in action, and duties afloat and in the various lines of surgical assistance; establishment of field, temporary, and permanent hospitals and lines of assistance; hospital attendants; diagnosis, prognosis, and treatment in full of all injuries in battle, including full instruction in abdominal surgery for wounds; the trephine, amputation, resection, and other operations, and the use of extemporary appliances; preparation and record of statistics relative to the systematic arrangement and classification of the wounded. Construction and study of ambulances of modern design.

CONSTRUCTION AND VENTILATION OF MODERN SHIPS OF WAR: Study of sectional plans of modern vessels of war, showing system of ventilation, heating, lighting sanitary fittings, arrangements of quarters, manner of berthing officers and men, air space, location of sick bays, dispensaries, storerooms, lavatories, bathrooms, etc.; list of ships of the navy, displacement, type, station, or condition; personal visits of inspection to all ships at navy yard, including receiving ship, vessels in commission, ships of war undergoing construction and nearing completion.

EXAMINATION OF RECRUITS AND LIFE-SAVING METHODS: Will include general inspection of surface of recruit, extremities and articulations, thorax, abdomen, groin and genitals, spine and perineum, head, face, and neck, cranium and organs of special sense, intelligence and age. In the preparation of "list of persons examined" (Form X), the directions embodied in the Book of Instructions will be strictly followed. Rules for restoring the apparently drowned—how to arouse the patient; to expel water, etc., from the stomach and chest; to produce breathing; after-treatment (externally and internally); evidences of vitality etc.

V.—He will assign assistant surgeons to the Naval Laboratory for instruction in the following practical work:

CHEMISTRY: GENERAL, ANALYTICAL, AND ORGANIC: Inorganic chemistry; also chemistry of air, water, artificial illumination, photography, lime, mortars and cements, building stones, decay and prevention, timber and its preservation, pigments, paints, essential oils, varnishes, explosives, gunpowder, guncotton, and nitroglycerin. Disinfectants for hospital and ship use. Metric system of weights; qualitative, quantitative, and blowpipe analysis; organic chemistry, general principles and methods of analysis.

Analytical Qualitative.—Having acquired a thorough experimental knowledge of the reactions of a group of bases or acids, single members of the group or mixtures

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must be submitted to him for identification, enabling him to proceed from simple to complex cases, until he is able to determine the composition of the most difficult mixtures.

Quantitative.—1. To analyze substances of known composition, such as crystallized salts, that the accuracy of his work may be tested by a comparison of his results with the true percentages.

2. Required to make analyses of materials occurring in commerce or in the applications of technical and sanitary chemistry, etc., as fertilizers, fuel, water; etc. The object being to instruct in analytical methods.

Organic.—The laboratory work to consist of: Ultimate analyses, including determination of carbon, hydrogen, nitrogen, sulphur, and haloid elements in organic substances; determination of vapor densities, molecular weights, specific gravities, melting and boiling points, and calculations of formulæ. Analysis must be made on material supplied or authorized beforehand by the instructor at the laboratory, and he will require of the student, whenever practicable, reports in writing on completion of the work.

MICROSCOPY AND MICROBIOLOGY: Practical acquaintance with the handling of the microscope, its construction, use, care, and choice; simple lens, optical principle, construction, and use; compound lens, low-power objectives, use and care; accessory apparatus, general method of work, illumination, effect of different media; the eyes, peculiarities, use, and protection; mounting, dry, in liquid, and in cells; section cutting soft and hard tissues, crystals, rock sections and grains; staining; high-power objectives, use and care, cover connections, and immersion fluids; adulteration of foods, drugs, etc., detection of fibers, paper, and handwriting.

Microbiology—Laboratory examination of unicellular forms of life, yeasts, protococcus, ameba, the molds, algæ, and fungi of fresh waters; fauna of potable waters.

General Bacteriology.—Isolation, preparation of culture media, mounting and study and identification of species, bacteria of potable waters, sewage bacteria, typhoid bacillus, biological examination of Croton water, Brooklyn aqueduct water, etc., bacteria of the atmosphere, biological analysis of air of hospital wards, class rooms, etc, disinfectants and filters, bacteriological tests.

VI.—Application, whenever necessary, will be made to the Commandment of the Naval Station, New York, for authority for the medical officer assigned to the duty, in company with the assistant surgeons undergoing instruction, to visit receiving ship, and all modern s ommssion, ships undergoing construction and nearing completion, that may be at the navy yard, for the purpose of inspection of every part of the vessel, and gaining information relating to general arrangement of sick and other quarters, system of ventilation and heating, air space, etc.

VII.—When assistant surgeons are assigned for instruction in specified branches to hospital, examining board, or laboratory, the senior officers thereof shall appoint, as they may deem advisable, the medical officers under them as instructors in the special work, assigning to each such subjects as may be agreed upon by consultation, care being taken that the system of instruction will necessitate everything in writing. The student must carefully prepare all reports on the subjects assigned to him before presenting them to the instructor for inspection and remarks. When papers are completed they shall be delivered by the instructor to the senior officer of the hospital, examining board, or laboratory, as the case may be, who will retain them until all papers prepared by the student during his term of instruction are received, when they shall be forwarded to Director of Naval Laboratory and Department of Instruction, in accordance with prescribed form.

VIII.—Medical officers, when assigned as instructors, whether attached to laboratory, hospital, or examining board, shall keep accurate record in book form of all work required of assistant surgeons undergoing instruction. These record books, when completed, shall be delivered to the Director of the Naval Laboratory and Department of Instruction to be placed on file. They will also see that assistant surgeons are provided with everything necessary to prosecute their work in an intelligent manner; use of apparatus for qualitative, quantitative, and organic analysis, for microscopy, and for bacteriology and chemical reagents for practical work in laboratory or elsewhere, use of surgical instruments and appliances for hospital work, free access to library, and use of modern text-books on every subject taught.

IX.—Assistant surgeons will be held responsible for the proper care and safe return of instruments, books, microscopes, apparatus of all kinds, etc., placed in their charge during course of instruction.

X.—When the professional record of an assistant surgeon is completed, and all papers prepared by him on subjects assigned at hospital, examining board, and laboratory have been received by the Director in charge of the Laboratory and Department of Instruction, he shall see that they are properly compiled and transmitted to the Bureau of Medicine and Surgery, in accordance with the prescribed form.

XI.—The assistant surgeon's professional record will be kept on file in the Bureau of Medicine and Surgery until he becomes eligible for examination for promotion, when it will be transmitted to the Naval Medical Examining Board for inspection, to be returned to the bureau on completion of his examination. This record, together with examination papers of both first and second examination, will then be bound in book form and kept for future reference, as a guide in assignment to duty, according to professional and other qualifications.

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ABSTRACTS

Visceral Philebotomy.—Harley (*Jour. of the Amer. Med. Ass.*) claims great success in the treatment of hepatic inflammation by withdrawing blood directly from the congested liver. His method consists in piercing the viscus with a long trocar about seven millimetres in diameter, so as to "wound one or more blood-vessels of sufficient caliber to yield a free stream of blood." After sufficient blood is withdrawn the finger is held over the mouth of the trocar till the stream of blood has clotted back into the viscus. The trocar is then withdrawn and the wound closed by adhesive plaster and a bandage applied.

He reports successful treatment by this means of several cases of chronic and acute hepatitis, and has seen it applied to pulmonary congestion. He seems to have met with no cases of subsequent internal hemorrhage, a danger not to be disregarded, for his only reference to this occurrence is indirect. He says, that on withdrawing the instrument it is important to get the clot in the canula to break off from that in the canal so as to leave the latter behind, in order that by its presence there it may prevent any oozing of blood from the organ. This is best done by giving a slight twist to the canula at the moment it is felt to leave the organ. The external puncture is closed by adhesive plaster and a flannel bandage bound firmly over it to bring the internal surface of the parietes against the wounded organ, to prevent the possibility of accidental internal hemorrhage.

It is hardly probable that the recommendation to extend this procedure to all the viscera, as the spleen and kidneys, will meet with a wide acceptance.

The Bacteriologic Diagnosis of Cholera.—The following is the mode of procedure carried out at the Institute for Infectious Diseases at Berlin, in a bacteriologic study of a suspected case of cholera (*Zeitschrift f. Hygiene u. Infectionskrankh.; Deutsche medicin. Wochenschrift; Amer. Jour. Med. Scienc*). Cover-glass preparations are first made (the flakes of mucus that are often present in the dejecta being selected) and stained with a dilute carbolized fuchsin solution. If comma bacilli be found, peptone cultures and gelatin plate-cultures are made. The peptone medium consists of a sterilized one per cent watery solution of peptone and of sodium chloride, to which sufficient soda is added to impart a decided alkaline reaction. This is kept at a temperature of 37° C. If cholera bacilli are present in large number, a pure culture will be found on the surface of the peptone solution at the end of six hours; if present in smaller number, the culture will develop more slowly and there will be an admixture of other bacteria. It is best to look for the bacilli in from six to twelve hours after inoculation. If the peptone contain a certain proportion of nitrates, if the sulphuric acid employed be free from nitrous acid, and if the cultures be pure, the cholera-red (indol) reaction will take place. A good ten per cent gelatin culture-medium is inoculated and kept at a temperature of 22° C. At the end of from fifteen to twenty hours characteristic appearances will have developed. If upon primary microscopic examination cholera bacilli have not been found, agar plates are cast in addition to the inoculation of the peptone solution and the gelatin plates. Six hours after the inoculation of the peptone solution curved bacilli are from time to time looked for; and as soon as found agar plates are cast. The material to be examined is preferably not mixed with liquefied agar; but the sterile agar is permitted to harden in covered dishes and placed for a few days in the thermostat to permit the expressed water to evaporate. The surface of the agar is then inoculated with the suspected material or from the peptone solution and kept at a temperature of 37° for eight or ten hours. If cholera bacilli be present they form colonies of light yellow, transparent appearance. If few cholera bacilli have been found in the peptone solution and few or no colonies on the gelatin plates, suspicious or doubtful colonies upon the agar plates must be transferred to other agar plates, to peptone solution, and to gelatin plates, so that sufficient material may be obtained for the purposes of the indol reaction and of experiment upon animals. For this last purpose, cultures from the surface of agar plates are to be preferred. With a platinum loop, about 1.5 mg. of the culture are taken and mixed with 1 c.cm. of sterilized bouillon and injected into the peritoneal cavity of a guinea-pig. This is lethal for a pig weighing from 300 to 350 grammes. The peptone solution may also be employed for the detection of cholera bacilli in water. To about 100 c.cm. or the suspected water are added one per cent each of peptone and sodium chloride and the mixture is kept at a temperature of 37°. In ten, fifteen, and twenty hours agar plates are to be inoculated with this solution. The resulting colonies are further cultivated upon peptone, glycerin, and agar studied for the indol reaction, and injected into lower animals.

The Results of Treatment by Tracheotomy and Intubation in Six Hundred and Ninety Cases of Diphtheria.—In an exhaustive paper, in which the indications for and comparative results of these methods are minutely studied, comprising six hundred and ninety cases of diphtheria occurring between 1874 and 1891, in the Children's hospital, in Zurich, Baer (*Deutsche Zeitsch. fur Chir.*) concludes that the better average results obtained by the method of intubation are not due to the earlier operation, but *cateris paribus*, are found in the operation itself, and especially in the youngest patients. There is apparently no distinction to be made in sex, either as regards prognosis or the course of the disease after operation. The mortality in the six hundred and ninety cases was forty three and eight-tenths per cent. Or, according to

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the tracheotomy and intubation periods, forty-five and three-tenths per cent, and thirty nine per cent respectively. Since, in the latter period, there was a greater number of operations in the pharyngo-laryngeal cases, in which the mortality is always very high, the actual mortality during the intubation period was eight per cent better than during tracheotomy.

The author does not, however, believe that the intubation operation is a rival of tracheotomy, but rather a means to be used before and in conjunction with it, tracheotomy being reserved for cases in which intubation fails. He gives the following as his indications and contra indications for performing intubation. These are not as many as have formerly been insisted upon, and he believes that the spread of the diphtheritic process into the trachea is not a contra-indication, as is shown by many cases reported. Feeble children should have intubation, since the wound complications make their chances much less. Cases which are brought *sub finem vitae* need intubation with short tubes, or trache otomy. When superior tracheotomy cannot be performed, intubation, on account of its shorter duration, is indicated. Indications for a secondary tracheotomy following after intubation are:

1. Where masses of membrane or free portions prevent laryngeal respiration, even after aspiration. This is, however, seldom observed.

2. When laryngeal and tracheal stenosis persist after intubation has been performed.

3. Where it is impossible to insert the tube on account of its being coughed up, and where there is threatened asphyxia.

The indications for a primary tracheotomy and contra-indications of intubation are:

1. Complete closure of the naso-pharyngeal space through swelling and membranous deposit on the mucous membrane of the pharynx and tonsils.

2. Intense edema of the glottis.

3. A retro-pharyngeal abscess as a complication.

4. In cases where the short tube cannot be used. He also recommends intubation in all forms of chronic stenosis, and reports two new cases.—*American Journal of the Medical Sciences.*

The Clinical Application of Ingluvin.—Ingluvin is the name given to a preparation made from the gizzard of the domestic fowl (John V. Shoemaker, *Medical Bulletin*). It is a yellowish, gray powder of a faint odor, and almost devoid of taste, It is insoluble in water Ingluvin is put up by its manufacturers, (Messrs. William R. Warner & Co., of Philadelphia) in 5 grain tablets. Ingluvin is compatible with alkalies. Its virtues reside in a peculiar-bitter principle which enters into its composition. It is prescribed in the same doses and combinations as pepsin. Ingluvin was introduced to the notice of the medical profession about 18 years ago. It is of special benefit in the relief of sick stomach. This substance may be given with success when vomiting depends upon organic affection of the stomach, as in acute and chronic gastric catarrh and in gastric ulcer. Nausea, due to disease of other abdominal or pelvic viscera, as the liver, kidneys, uterus and ovaries, is likewise relieved by the administration of this remedy. It allays the gastric irritabiliry which accompanies tabes-mesenterica and marasmus. Vomiting produced by over indulgence in liquor has been subdued by its powers. It has been found of advantage in cases of sea sickness, and in the relief of the gastric irritability of bottle-fed babes. Its peculiar province, however, is alleviation of the vomiting of pregnancy, in which it approaches the character of a specific. As every one knows, this difficulty is frequently very intractable, and one approved remedy after another may be used without avail. To those who have witnessed repeated failures of medication, ingluvin can be recommended as one of the most efficient remedies which we possess for the relief of this distressing symptom. Ingluvin is likewise beneficial in dyspepsia, when produced by functional inactivity. It is able to promptly check the diarrhea which is caused by indigestion. By reason of its influence upon the stomach and bowels, ingluvin is capable of marked service in cases of cholera infantum and cholera morbus. From the preceding account it will be seen that ingluvin possesses an exceedingly important sphere of usefulness.

Ten grains I found generally a sufficient dose. In some instances 20 grains were required, while in the milder forms of indigestion a 5 grain tablet, after each meal, accomplished the desired purpose. To infants I gave the remedy in doses of 1 or 2 grains.

A series of cases occurring during the past few years in which Ingluvin was administered with benefit has been selected as affording a typical example of the efficacy of Ingluvin. The total number amounted to 49 and a brief history is given of each case. They were classified as follows:—4 cases of cholera morbus; 8 of infantile diarrhea; 9 of diarrhea in the adult; 2 of dysenteric diarrhea; 1 of acute indigestion; 3 of dyspepsia; 2 of dyspepsia with reflex symptoms; 1 of dyspepsia from uterine disease; 2 of flatulent dyspepsia; 1 of nervous dyspepsia; 2 of gastralgia; 2 of colic; 4 of gastric and gastro-intestinal catarrh; 1 of gastric ulcer; 1 of vomiting caused by alcoholism; 6 of vomiting of pregnancy.

Relations of Dyspepsia to Pulmonary Tuberculosis.—At a recent French Congress for the Study of Tuberculosis recently held in Paris, one of the subjects discussed was that of the relationship of dyspepsia to pulmonary tuberculosis (Boston *Med. and Surg. Jour.*).

Marfan has maintained in his thesis that the digestive disturbances of the phthisical bear the relation not of cause but of effect; in other words, they are but one of the manifestations of the tuberculosis. Often the dyspepsia masks the tuberculosis. Marfand believes the initial dyspepsia to be caused by a "humoral state."

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According to Hayem, whose paper attracted much notice, the gastritis of the phthisical is a common gastritis due to the ordinary causes of stomach inflammations. It is generally accompanied with retardation in the evacuation of the stomach and consequently with dilatation. It sometimes precedes for several years the appearance of the tuberculosis, and is only exaggerated at the onset of the phthisis in patients who take excitant drugs or who adopt a regimen not adapted to the state of their stomachs.

The causes of the gastric affections of the phthisical are those of ordinary gastric affections, to wit, the abuse of tobacco and alcohol, errors in diet, etc. It is a mixed gastritis, parenchymatous and interstitial.

In one case, Hayem found, at the autopsy, a general amyloid condition of the entire mucosa; in another, a necrosis due to a thrombosis; exceptionally, he has met with a tuberculous ulcer.

A gastropathy of uncertain source begins early in life; it entails a state of general debility, and at a certain moment pulmonary tuberculosis bursts forth. The physician then institutes an active treatment based on super-alimentation and the abuse of medicaments.

Under the influence of this particular regimen continued for months, there supervene the symptoms of violent gastric catarrh, in other words, the "initial gastric syndrome" of Marfan, It is simply the exaggeration of a gastropathy which had existed for many years, sometimes fifteen or twenty years before the appearance of the pulmonary accidents. Under a suitable dietary regimen and the suppression of medicines these gastric symptoms vanish.

When the attending physician discards the administration of irritant medicines and prescribes nourishing, easily digested food, he will even in febrile cases see the condition of the stomach improve.

The tuberculosis at the onset, then, does not make the state of the digestive organs evidently worse. On the contrary, there are few diseases which so rarely affect the stomach. One is often astonished at the digestive capacity of the phthisical, who will eat more nutritious food than a well man.

In concluding, Hayem said that with the exception of rare lesions, ulcerations, amyloid degenerations, etc., the gastritis of the phthisical is of the common kind.

It is sometimes latent, and is not diagnosticated before the appearance of the tuberculosis. It should, nevertheless, be a subject of preoccupation by the medical attendant, for this gastritis may end in grave gastropathies, and open the door to pulmonary tuberculosis. In hospital patients it would seem that chronic alcoholism is a frequent cause of gastritis.

One of the best means of warding off pulmonary tuberculosis in the predisposed consists in treating the gastropathy.

The proper medication addressed to the digestive tube may perhaps in some subjects arrest tuberculosis at the onset.

MEDICAL SOCIETIES

Military Medicine and Surgery. — Brigadier General George M. Sternberg, Surgeon General U. S. Army, and Executive President of the Section on Military Medicine and Surgery, delivered the following address before the Pan American Medical Congress, at Washington, D. C., Sept. 6, 1893. (*Jour. Am. Med. Association*).

GENTLEMEN.—We are assembled for the purpose of discussing questions relating to Military Medicine and Surgery; to consider what progress has been made in the treatment of camp diseases and of gun-shot wounds as a result of recent discoveries relating to the etiology of infectious diseases and of traumatic infections; to profit by the experience of those who have had experience in the care of wounded men upon the field of battle and of the sick of armies engaged in actual warfare; to deliberate as o the best methods of transporting the wounded from the firing line and of rendering them the immediate assistance which may be required to save life; to compare the injuries inflicted by firearms now in use with those which came under our observation when a larger bullet with a much less initial velocity was the missile which caused a majority of the wounds we were called upon to treat.

All of these questions are interesting to us as military surgeons and o vast importance so far as the victims of future wars are concerned. It is true that peace prevails everywhere in the new world; that a most friendly feeling exists among the republics of North and South America; and that the modern way of settling disputes between nations is by arbitration rather than by a resort to arms. But so long as armies exist and deadly weapons are manufactured it will be the duty of the military surgeon to be prepared to render efficient aid to those who fall in battle, and to give the victims of those "camp diseases" which sap the strength of armies the benefit of the most efficacious treatment.

A still more important part of the duty of the medical officer in garrison or in the field consists in the sanitary supervision of the command with which he is serving; for, without doubt, most of the sickness which prevails among soldiers, and especially among new levies of troops, is due to insanitary conditions, and is preventable to a greater or less extent according to circumstances. But the subject of military hygiene does not properly come within the province of this Section, and we simply refer to its importance *en passant*.

We are, however, especially interested in the subject of the transportation of wounded men from the field of battle. And in future wars we will have to meet new conditions, arising from the use of weapons having an extremely long range and from the nature of wounds inflicted by bullets of small caliber projected with enormous velocity. Men wil ..e disabled in great numbers within very brief periods of time, and of those

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struck by these missiles a large portion will require to be promptly removed from the field of action, for a smaller proportion will be killed outright.

Under these circumstances it is evident that our organization for the purpose of rendering first aid to the wounded and transporting them to the field hospitals must be carefully considered, and that the most efficient service will require a corps of assistants especially trained for this duty.

This matter has already received the careful attention of medical officers in the United States army, and we have now an organization designed to perform these duties, with the assistance of "company bearers" who also receive special training with reference to first aid, litter drill, etc. In time of peace our enlisted men of the "hospital corps" perform the duties of nurses, cooks and attendants in post hospitals, and they are regularly drilled in the most approved methods of handling wounded men and removing them from the field of battle.

A manual of drill for the hospital corps has been prepared by a board of medical officers and approved by the Secretary of War. It will shortly be published "for the information and government of the army and for the observance of the militia of the United States." A demonstration of the litter and ambulance drills, as directed by this manual, will be made by Major Hoff of the medical department of the army, English speaking secretary of this Section, who was one of the medical officers to whom the duty of preparing the manual was intrusted. After this demonstration I hope we may have a free discussion of the merits of the system, as compared with the older, haphazard way of caring for wounded men which prevailed during our civil war.

There are many present whose experience upon the field of battle will enable them to judge of the advantages which are likely to result from system and previous training in handling wounded men; and also of the practicability of carrying out, upon the firing line, the methods which have been adopted.

The results obtained by our military surgeons during the late war are summarized in the accompanying table, which has been prepared, at my request, by Maj. Chas. Smart, Surgeon U. S. A., from the data on file in the Surgeon General's office. The table also shows the number of amputations and excisions made by medical officers of the army since the war and the percentage of mortality from the same. It will be seen that the mortality rate has been considerably reduced. This is no doubt partly due to improved methods of treatment, and especially to antiseptic surgery, although a considerable proportion of the operations made since the war were made before the general adoption of antiseptic methods, or under circumstances which did not admit of the strict application of these methods.

For the purpose of showing the enormous responsibility of the medical department of the army in time of war the following figures are given, showing the total number of cases treated in the armies of the United States during the late war, as given in the "Medical and Surgical History of the War of the Rebellion." The figures relate to white troops only, and are for the period from May 1, 1861 to June 30, 1866:

TABLE SHOWING THE NUMBER OF AMPUTATIONS AND EXCISIONS OF THE EXTREMITIES DURING THE WAR OF THE REBELLION AND THE PERIOD 1866-1891, WITH PERCENTAGES OF MORTALITY.

UPPER EXTREMITY.

	During the War.		Since the War.	
	Number of Cases.	Percentag of Mortality.	Number of Cases.	Percentage of Mortality.
AMPUTATIONS:—				
Shoulder	852	28.5	7	14.3
Arms	5,456	23.6	62	19.4
Elbow	36	8.4	1	....
Forearm	1,147	13.9	57	8 8
Wrist	68	10.6	10	....
Fingers, with or without metacarpals	7,842	2.6	830	.1
Total	16,601*	....	967	....
EXCISIONS:—				
Clavicle or scapula, partial	80	2.7	1	....
Shoulder	885	34.8	5	20.0
Humerus	696	28.5	11	....
Elbow	626	23.7	5	20.0
Bones of forearm	986	11.2	7	....
Wrist	96	15.6	1	....
In hand	116	8.6	22	4.5
Total	3,485	....	52	....

LOWER EXTREMITY.

	Since the War.		During the War.	
	Number of Cases.	Percentage of Mortality.	Number of Cases.	Percentage of Mortality.
AMPUTATIONS:—				
Hip	66	83.3	4	75.0
Thigh	6,229	53.8	63	41.3
Knee	189	56.6	7	....
Leg	5,452	32.9	87	20.7
Ankle	161	25.1	21	9.5
Partial, of foot	1,518	5.7	182	....
Total	13,615*	....	364	....
EXCISIONS:—				
Hip	66	88.6	6	33.3
Femur	175	69.4	3	33.3
Knee	57	81.4	..	....
Bones of leg	387	28.2	6	16.7
Ankle	33	29.0	3	....
Bones of foot	97	19.3	6	....
Total	813	....	24	....

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*In addition to the amputations reported above as performed for gunshot fracture during the war, there were 585 amputations of parts of the lower extremity, with a mortality of 25 5 per cent, and 194 of the upper. with 10 per cent mortality on account of extensive flesh wounds, in which the fatality was due mainly to shock.

The total number of cases recorded in reports of sick and wounded was 5,825,480, with a total mortality of 166,623. The total number of gunshot wounds was 230,018, with a mortality of 32,907. (The total number killed in battle was 42,724.) The total number of deaths from disease was 157,004, the principal causes of mortality being; typhoid fever 27,056+typho malarial fever 4,059=31,115; chronic diarrhea, 27,558; inflammation of lungs. 14,738; consumption, 5,286; smallpox, 4,717; measles, 4,246; acute dysentery, 4,084; chronic dysentery, 3,229; remittent fever, 3,853. No doubt many of the deaths attributed to "remittent fevers" were in fact due to typhoid infection, which in this war, as in many of those which preceded it, proved to be nearly as fatal to the troops engaged as the bullets of the enemy.

No question is more important for the medical officer than that which relates to the prevention of typhoid fever and the various forms of intestinal flux which in the past have caused such enormous losses to armies engaged in active field operations. No doubt a very large proportion of the sickness from these causes could be prevented by the simple prescription—boil all water used for drinking purposes which does not come from a source that is unquestionably pure.

But the question of the prevention of these camp diseases so destructive to armies, and especially to new levies of troops in warm climates, belongs to the Section on Military Hygiene, and I must restrict myself to topics which come strictly within the province of military medicine and surgery.

I therefore ask your attention for a short time to a subject which has been of great interest to military surgeons in the past but which, in the light of our present knowledge, should be interesting to us rather from an historical than from a therapeutic point of view. I refer to the question of traumatic infections. Hospital gangrene, erysipelas, septicemia and tetanus have no longer the terror for us that they had for our predecessors, for the etiology of these traumatic infectious diseases has been elucidated by researches made during the past fifteen years and, knowing the cause, the proper measures of prevention are apparent and are systematically applied whenever this is practicable.

That the infectious diseases mentioned result from the introduction into wounds of pathogenic bacteria is now definitely settled, and in the case of erysipelas and tetanus we know the specific characters of the parasitic invader which gives rise to these forms of wound infection. But no such demonstration has been made as regards hospital gangrene, probably because bacteriologists have had no opportunities for investigating this disease since the introduction of Koch's admirable methods of research. The writer, while in charge of the surgical wards of a large general hospital at Portsmouth Grove, R. I., in 1862, witnessed a typical epidemic of this disease which served as a lesson never to be forgotten. The two wards devoted to the treatment of surgical cases were filled with wounded men from the Army of the Potomac. A considerable proportion of the cases were simple flesh wounds, progressing favorably to a cure by granulation and cicatrization.

Others were of a more serious character and were attended with profuse suppuration. The hospital was favorably located on Narragansett bay; supplies of all kinds were abundant; nurses were in sufficient number and attentive but the medical officer in charge was young and inexperienced. Under his direction the wounds were systematically cleansed and dressed with absorbent lint, etc Nature seemed to be fully equal to the work of repair, except in those cases where a mistaken conservatism at the field hospital had left compound fractures to her unaided efforts. In such cases profuse suppuration, and septic toxemia sapped the strength of strong men. Possibly it was in such a case that the mischief commenced. Doubtless it was from one or more initial cases that the infection was carried by the sponges of willing but ignorant attendants to a considerable number of wounds which up to this time were progressing rapidly towards cicatrization. The result was a conflagration. Wounds previously healthy became inflamed, and angry looking, and within two or three days the cause of this change was apparent. The area of inflammation involving the previously healthy tissues rapidly extended and sloughs formed, sometimes as large as a man's hand and extending deeply among the muscles and along the planes of cellular tissues. Fortunately the infectious nature of the malady was quickly recognized and the measures adopted arrested its progress. It is hardly necessary to say that these measures included the removol of those not yet infected from the overcrowded surgical wards, a general cleaning up, whitewashing of walls, etc., and the necessary precautions relating to the conveyance of infection by sponges, etc. The treatment of the gangrenous wounds consisted in deep cauterization by means of nitric acid applied with a swab, the removal of necrosed tissue as soon as practicable, and the application of charcoal poultices. Goldsmith's bromin treatment had not yet been suggested. Under the treatment adopted the local extension of the disease was promptly arrested, and as soon as the sloughs had separated healthy granulations sprang up and in time repaired the mischief which had so quickly occurred.

This brief account of an epidemic of hospital gangrene witnessed by myself is intended to serve as an introduction to some remarks upon the history and etiology of this affection.

It is altogether probable that it was known to Celsus, who has described a condition of wounds not properly treated, which appears to be identical with the affection known to us as hospital gangrene. Etius, who wrote in the fifth century, refers briefly to a similar affection. Some of the ancient authors appear to have described

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the form of wound infection under consideration by the name of "carbuncle." Rolandus, who wrote in the twelfth century, had a chapter in his third book on wounds, entitled "De Carbunculo supervenienti vulneri." Alphonsus Terrus, who, in 1534, published one of the first treatises upon gunshot wounds, was of the opinion that all wounds of this class were poisoned by the gunpowder. He gives an account of the results of such supposed poisoning which makes it appear probable that he encountered hospital gangrene. He recommended the actual cautery as a cure for this condition, and also as a preventive. Ambrose Pare combated the idea that gunshot wounds were poisoned by gunpowder or burned by the ball, and attributed the unhealthy condition into which such wounds were sometimes observed to fall, to a "corrupted state of the atmosphere." He remarks that, owing to this cause, "Nous en sommes devenus sages par l'experience de tant de plaies, lesquelles lorsque je m'efforcais a les guerir, rendoient une telle et si grande puanteur, indice et temoinage tres certain de pourriture et infection, que les assistans ne la pouvoient sentir qu'a, a conter cœur,et avec bien grande difficulte."

Pare's treatment of hospital gangrene consisted in the application of an ointment containing pulverized alum, verdigris, and sulphate of copper. It does not appear to have been very successful, as he reports that in many of the wounded in the battle of St. Denis the wounds fell into putrefaction and were accompanied by putrid fever and other serious accidents, and nearly all the wounded died, although their wounds may have been slight and they were supplied with everything necessary for their proper sustenance and treatment. According to Pare the wounds made by swords, pikes and lances became affected with gangrene (les pourritures) as well as those made by firearms.

La Motte, who wrote his "Complete Treatise on Surgery" early in the seventeenth century, gives a very complete account of hospital gangrene. He says: "On prend ce mot" (gangrene) properment pour un disposition a la mortification qui est ce qu'on appelle vulgairement *pourriture* a l'Hotel Dieu de Paris, laquelle survient et accompagne presque toutes les playes qui sont traites dans cet Hopital, et la plus grande partie des abces que l'on y ouvre, a cause de l'air corrompu qui y regne et que ces blessez y respirent."

The practice of surgery in a hospital where the opening of an abscess was likely to be followed by rapidly spreading gangrene must have been rather discouraging and so long as the idea prevailed that this resulted from "a corrupted condition of the air," rather than from direct infection conveyed from wound to wound by instruments, sponges, etc., there was little chance of eradicating the evil.

Ponteau, who wrote in 1783, referring to the prevalence of gangrene in French hospitals, raises the question whether such institutions are not, on the whole more pernicious than useful to mankind. What would these surgeons of two hundred years ago have thought of our laparotomies for removal of the appendix, etc.; of our operations upon the principal joints; and of the absence of "surgical fever" after serious operations made antiseptically or with aseptic precautions?

Mr. John Bell, in his "Principles of Surgery" published in 1799, says:

"There is no hospital, however airy or well regulated, where this epidemic ulcer is not found at times." (p. 112) "He must indeed be ignorant who disputes this hospital sore being a general disease of the system; he must have observed very little who does not know it to be absolutely an infection." (p. 117) "Is the surgeon to seek for washings and dressings, use ointments and plasters, and expend butts of wine to cure such a disease? No; let him bear this in mind that no dressings have ever been found to stop this ulcer—but, on the other hand, that out of the circle of the hospital the patients are safe; carry them anywhere, and at any expense, even to a stable or a dunghill." (p. 118).

No doubt this was good advice in the absence of any exact knowledge as to methods of disinfection, for even if the infectious material was destroyed in the wounds by the actual cautery, or by applications of fuming nitric acid, there was always danger of re-infection so long as the patient remained in the infected hospital wards.

The total number of cases of gangrene reported during our civil war, as occurring among the wounded of the Union armies was 2,642. Of these four cases occurred in 1861; 223 in 1862; 623 in 1863; 1,611 in 1864, and 135 in 1865; 1,361 cases terminated in recovery, and 1,142 were fatal; but in a considerable number of the fatal cases death was due to the original injury or to other complications—septicemia, hemorrhage, etc.

For details with reference to the principal epidemics of hospital gangrene during the war I must refer to the interesting reports of Acting Assistant Surgeon W. W. Keene, U. S. A.; Surgeon J. H. Brinton, U. S. V.; Surgeon M. Goldsmith, U. S. V; Assistant Surgeon William Thomson, U. S. A., and others, extracts from which will be found in the third surgical volume of the "Medical and Surgical History of the War."

The facts detailed in these reports correspond with those previously observed in various parts of the world, and show that hospital gangrene is a local disease due usually to the infection of wounds from previous cases.

This brings us to the question as to the origin of the primary cases in an epidemic, a question which is of special interest, not only as regards this disease, but in its bearing upon the etiology of other local infectious processes.

Do epidemics originate *de novo* as a result of an increased pathogenic power on the part of some common putrefactive microorganism, or is there a specific "germ" of hospital gangrene? The former supposition appears to me to be more in consonance with the facts relating to the origin of epidemics, and is sustained by extended experimental researches which show that the

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pathogenic potency of many bacteria is greatly intensified by cultivation in albuminous fluids and under favorable conditions. This is true of the pus cocci, which may thrive upon the surface of the body of healthy persons or upon mucous surfaces as harmless parasites; but which under favorable conditions may invade the tissues producing acute abscesses, erysipelatous inflammations or gangrenous sloughs, according to the pathogenic potency of the micrococcus and the degree of vital resisting power on the part of the tissues The streptococcus pyogenes from a malignant case of erosipelas or from the abdominal cavity of an individual who has succumbed to puerperal peritonitis may give rise, when introduced beneath the skin of a healthy person, to the most violent local inflammation and to general septicemia. But if cultivated for a length of time in unfavorable artificial media its pathogenic potency may be so reduced that it gives rise to a local abscess only.

The same has been demonstrated, by experiments upon the lower animals, to be true as regards certain bacteria found in putrefying material. Some of these when injected beneath the skin of a mouse, a rabbit, or a guinea pig, give rise to a rapidly fatal septicemia; others cause an extensive inflammatory edema in the vicinity of the point of inoculation; still others to a progressive gangrene. By inoculating from animal to animal, the virulence of the pathogenic microorganism inducing these morbid phenomena is increased, so that the smallest fraction of a drop of blood, or of bloody serum from the subcutaneous tissues of an animal recently dead from such an inoculation suffices to kill another animal of the same species within a brief period. But there is another element which influences the result when virulent putrefactive material is introduced beneath the skin of an animal for experimental purposes, or into an open wound by accident, i. e, the vital resisting power of the tissues. The body of a dead animal under favorable conditions of temperature is quickly invaded by putrefactive bacteria. But in the living animal such invasion is successfully resisted in many cases, even when putrefactive bacteria are brought in contact with open wounds. This is especially true as regards carnivorous animals, while the herbivora are especially susceptible to local or general infection when putrefactive material is brought in contact with an open wound. There is also a difference in individual susceptibility in animals of the same race. As a rule, young animals are more susceptible than adults, and susceptibility to infection is increased by depressing influences, such as insufficient food, excessive exertion, bad air from overcrowding or putrid emanations, etc.

It is under such depressing influences that epidemics of hospital gangrene have commonly had their origin. That the disease may originate independently of preexisting cases seems to be well established by the history of independent outbreaks in distant parts of the country during the war, in new hospitals and among wounded men brought directly from the field of battle.

Billroth, in his "Surgical Letters from the War-hospitals in Weissenburg and Mannheim" (1870), says:

'While I was at Mannheim but a single case of hospital gangrene occurred. This was in barrack J of the hospital which had been placed under my direction. The medical officer of the day did not recognize the disease and first called my attention to it on the third day. Fortunately no other cases had become infected I cauterized the wound (a gunshot fracture of the upper arm) with fuming nitric acid and after separation of the slough it was again healthy. In Darmstadt, in the great barrack hospital, two or three cases occurred which were treated the same way and isolated. So far as I am informed this was the end of the trouble."

In discussing the origin of these cases Billroth says:

"Where did the contagion come from for the one case in Mannheim and for the cases in Darmstadt? That I really cannot say, but I suspect that the infectious material was attached to lint which had been made from hospital linen, or had been scraped in a hospital in which hospital gangrene existed. This suspicion may appear very singular to many physicians, but will serve to show how thoroughly I am convinced of the specific origin of hospital gangrene."

To the writer it appears far more probable that these were cases of the *de novo* origin of gangrene as a result of the introduction into a suppurating wound of saprophytic bacteria which, owing to favoring conditions in the wound itself or to slight resisting power on the part of the tissues, had acquired sufficient pathogenic virulence to enable them to invade living tissues. It may be that there is some particular saprophyte, which is widely distributed, to which this result is commonly due; or it may be that there are a number of putrefactive bacteria which under favorable conditions may acquire this power of invading living tissues. The result is probably due, to some extent, to the development of toxic ptomaines in the secretions of the wound by putrefactive bacteria present in these secretions, which, being absorbed, lower the vital resisting power of the tissues. Deep and profusely suppurating wounds, and especially gunshot fractures of the larger bones, in which pockets and sinuses occur from which it is difficult completely to remove accumulations of pus, furnish the conditions most favorable for the development of such pathogenic virulence as may suffice to make a saprophytic bacillus a facultative parasite.

The greater liability to the development of hospital gangrene in wounds complicated by fracture of bones is shown by the accompanying table, which is taken from the "Medical and Surgical History of the War." (Third Surgical Volume, p. 824.).

It is a remarkable fact that while the larger number of cases occurred in wounds attended with fracture, the greatest mortality resulted in simple flesh wounds.

From our point of view the etiology of hospital gangrene does not differ materia ly rom that of traumatic erysipelas so far as general conditions are concerned,

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but the two diseases are doubtless due to different microorganisms. That which is the usual cause of erysipelas is now well known to bacteriologists under the name of streptococcus pyogenes, or streptococcus erysipelatos.

SUMMARY OF 2 642 CASES OF GANGRENE, INDICATING THE RESULT AND RELATIVE FREQUENCY.

Seat of Injury.	Recovery.	Fatal.	Undetermined.	Total.	Percent. of Fatality.	Per Cent. of Relative Frequency.
Flesh wounds of head, face and neck	5	7	..	12	58.3	60=2.2
Fractures and penetrating wounds of head, face and neck	32	16	..	48	33.3	
Flesh wounds of neck	36	32	7	75	47.0	216=8.2
Fractures and penetrating wounds of trunk	44	97	..	141	68.7	
Flesh wounds of the upper extremities	47	50	12	109	51 5	2,366=89.6
Fractures of the upper extremities	476	245	14	735	33 9	
Flesh wounds of the lower extremities	125	127	92	344	50.3	
Fractures of the lower extremitie	596	568	14	1,178	43 6	
Aggregates	1,361	1,142	139	2,642	45.6	

Whether hospital gangrene is a specific infection in the same sense that erysipelas is, i. e, an infection due to a specific microorganism has not been determined, but it seems probable that such is the case. It does not follow from this, however, that all cases of these traumatic infectious diseases originate by direct or indirect transfer of the infectious agent from previous cases. Erysipelas does not necessarily result from the introduction of streptococcus pyogenes into an open wound. This streptococcus is frequently found in the pus of acute abscesses unattended with any erysipelatous inflammation. But under favorable conditions it may develop virulent properties, which are manifested especially by a tendency to invade the tissues by way of the lymph channels and along cellular planes, producing a dilatation of the capillary vessels and more or less serous effusion, leading often to suppuration and sometimes to necrosis of the invaded tissues. The development of first cases of either disease probably depends upon predisposing causes relating to the individual or his environment. A traumatism is more likely to be followed by erysipelas in a man whose vitality is below par on account of intemperance, insufficient food, bad hygienic surroundings, etc., and the same is true as regards hospital gangrene. Under such conditions the comparatively harmless streptococcus pyogenes may overcome the barriers established by nature to resist invasion by saprophytic bacteria, and having acquired the power to multiply as a parasite in tissues enfeebled by the causes mentioned it soon attains a pathogenic virulence which enables it to invade healthy tissues when transferred by accidental inoculation to another individual.

The view here advanced with reference to the *de novo* origin of erysipelas is supported by the fact that solitary cases frequently occur at remote military posts. Thus during the past year twenty-eight cases are reported as having occurred among the enlisted men of the United States Army. Of these eighteen occurred at eighteen different posts, while three posts had two cases each and one post had four.

The facts relating to the etiology of pneumonia correspond with those referred to as relating to that of erysipelas. In this disease, also, the specific cause has been shown to be a micrococcus (Mic. pneumoniæ crouposæ) which is frequently found in the salivary secretions of healthy persons, and which varies greatly as to its pathogenic virulence. Solitary cases of the disease occur at our military posts, as elsewhere, as a result, no doubt, of predisposing and exciting causes which give the specific cause the mastery over the resources provided by nature for resisting the local infection which constitutes the disease in question.

The total number of cases of traumatic erysipelas reported as occurring in the armies of the United States during the war was 1,097, with a mortality of 41 per cent.

The micrococcus which is now recognized as the usual cause of erysipelatous inflammations is capable of growing either in the presence or absence of oxygen; i. e., it is an aerobic and facultative anaerobic microorganism. We infer that the same is true as regards the microorganism which produces hospital gangrene. But in the case of tetanus, which has been proved by recent researches to be an infectious malady due to a bacillus widely distributed in the superficial layers of the soil, it has been shown that this bacillus is a strict anaerobic. It does not grow in the presence of oxygen and could not thrive in superficial wounds. This probably accounts for the fact that epidemics of tetanus are not common. The cases which occur are for the most part sporadic cases, due in each instance to infection, resulting from the introduction of surface soil or dust containing the tetanus bacillus. Such material in an open wound might be inoccuous. But introduced into the depths of a gunshot wound, into a closed amputation wound, or into a punctured wound made by a rusty nail, for example, the tetanus bacilli (spores) present find the conditions favorable for development and this fatal infectious malady results.

Sporadic cases of hospital gangrene probably occur in a similar way, but as there is a free escape of virulent material from the infected wound, the danger of the disease being transmitted to other wounded individuals is infinitely greater.

The total number of cases of tetanus reported in the "Medical and Surgical History of the War" is 505, or a

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little more than two per thousand of the total number of injuries by weapons of war. More than one-fourth of the cases followed operations upon the extremities; 116 after amputations, and fifteen after excisions. We can scarcely doubt that a majority, at least, of these cases would have been prevented by modern methods of treatment—antiseptic or aseptic.

The same statement applies to the considerable number of cases reported under the heading pyemia. It seems probable that of the 2,818 cases reported under this heading a large proportion were in fact cases of septicemia resulting from wound infection. The very great mortality, and the results of post-mortem examinations made, indicate this; but as it was before the days of bacteriological research there is no direct evi dence on record showing the presence of bacteria in the blood and in the metastatic abscesses found in the lungs, the liver, the kidneys, spleen or joints in those cases in which an autopsy was made. Doubtless septic toxemia occurred in numerous cases but, as stated, we infer that a majority of the cases reported under the heading pyemia were in fact cases of septicemia resulting from infection through the wound, by the pathogenic micrococci which are commonly concerned in this form of "blood poisoning," and especially by staphylo coccus aureus. The mortality in the class of cases under consideration exceeded 97 per cent. Out of the total number of deaths (2,747) but twenty-one are reported to have resulted from other complications,—viz., hemorrhage seven, gangrene six, tetanus two, erysipelas one, peritonitis one, and typhoid pneumonia four.

One of the questions to be settled by the military surgeon in the next great war, which we earnestly hope will not occur on this continent, is to what ex tent the large mortality which has heretofore occurred from traumatic infections can be prevented by anti septic methods of treatment. Certainly there will be no excuse for the occurrence of septicemia after amputations, or for the appearance of erysipelas or hospital gangrene in wounds made by the knife of the surgeon. But how far it may be practicable to prevent such complications in gunshot fractures remains to be seen, and the proper treatment of such injuries is an important point for consideration. If such cases could at once receive skillful surgical treatment, including the removal of splinters, foreign substances carried into the wound by the bullet, and antiseptic dressings, no doubt many would be saved without loss of life or limb. But the changing fortunes of the battlefield often make it impossible for medical officers to give such prompt at tention to the wounded. It is generally conceded that on the firing line nothing more should be attempted than the arrest of hemorrhage, and such support to the fractured limb as will enable the wounded man to bear transportation to the field hospital with the least possible suffering. It is here that the fate of the unfortunate victim of war will often be decided, and the responsibility resting upon the military surgeon under such circumstances cannot be overestimated. His decision with reference to operative interference must be prompt, and will often be governed by circumstances other than those laid down in surgical textbooks. How far must the man be transported before he will reach a resting place at a permanent hospital? What are the means of transportation? Is he to be left at the mercy of the enemy as a prisoner of war? Shall his case be passed by because of others more urgently requiring attention? Many a leg must be sacrificed which might be saved under more favorable conditions, and con servative surgery must often yield before the inexorable contingencies of the battlefield.

In future wars the question will be decided as to the propriety of performing laparotomy at the field hospital in penetrating wounds of the abdomen, for the purpose of exploration, and suturing the intestine if it is found to be wounded. This is so important a question that I have attempted to make it the most prominent surgical topic for discussion at the present meeting, and trust that as a result of this discussion we may arrive at definite conclusions as te what our action should be if called upon to treat such cases.

What has been said will suffice to indicate to the young medical officer that much is expected of him; and that in view of recent additions to our knowledge relating to the etiology of the more common camp diseases, and of traumatic infections, and to our resources for preventing and curing such diseases, we have a right to expect a great reduction in the mortality from sickness and wounds in the armies engaged in future wars.

Highy Resistive Germs in Gelatine.—Dr. Heim (*Centralbl. f. Bakt*, *Brit. Med Journ.*) draws attention to the hitherto unpublished fact that spores exceedingly difficult to destroy sometimes occur in gelatine ordinarily employed in the preparation of culture media. He observed that a great number of gelatine tubes, prepared and sterilized as usual became spoiled by the growth of yellow colonies which proved to be composed of spore-containing bacteria. Contamination from all other sources was carefully excluded, and traced definitely to the gelatine by an experiment which consisted in dissolving some of the suspected material in sterilized broth, and exposing the latter to steam for one hour, a procedure which experience shows to be effective in the destruction of ordinary germs. The broth was then kept in the incubator, and on the following day showed definite growth. This experiment was repeated several times with the same result. Further investigation showed that an exposure to free steam of six hours' duration was necessary to destroy the spores of these bacteria. Fifteen minutes however, sufficed when compressed steam (1 atmosphere) was employed. The characteristics of these organisms are being further investigated.

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NOTES AND ITEMS

The Red Cross and the Projected Samaritan Union.—Dr. Joseph Kuhn, of Vienna, in a recent pamphlet, controverts the arguments of Professor Billroth in favor of the proposed Samaritan Union. A few of Dr. Kuhn's points are as follows: As the Red Cross Society, to which is intrusted the noblest tasks of humanity both in war and peace, is one of vital import ance, it will be eminently proper to examine the proposed movement carefully, and ascertain if in reality its advantages would be as great as its projector would have it belived. The Union proposes to take care of the physical well-being of the peo ple, which, according to law is the duty of the communities under the direction of the government, and for this work the Union desires a yearly appropriation from the state. Although this is a fair proposition, it is obviously the sounder principle to educate the communities in sanitary measures and help the poorer communities to build hospitals, etc., whenever and wherever necessary, directly from the treasury of the state rather than indirectly through an association. If the plans of the Samaritan Union were carried out the communities would become more and more dependent on the Union, therefore would be crippled in their independent prophylactic measures, and in a formidable epidemic would be helpless. In the event of war the dependent communities would be left without resource, as it is expressly stipulated that then the entire *personnel* of the Union must be turned over to the Red Cross. This would paralyze the public sanitary service and expose state and community to great danger. Even though the Samaritan Union were actually to render valuable assistance in times of great calamity, it would still be contrary to sound business policy, for in a long time of peace the people would lose sight of the activities of the Red Cross, and the latter would thus be hampered in the collection of funds to carry out the provisions of its great work, viz., the care of the sick in war. As there is no better way of preparing the Red Cross for war than in the perfecting of its aid service in time of peace and as the important provisions of the two services are the same, therefore, to be harmonious, they must be under one organization. The Samaritan Union, in urging the voluntary aid service overlooks the important facts that the Red Cross has been authorized by law to provide such service, and that there are already many allied aid societies in existence. The centralization plan of the Samaritan Union was tried very thoroughly in Germany a few years ago by Dr. Friedrich von Esmarch, who established a union, erecting schools where first aid to the injured could be taught practically. Though the ideas there promulgated were excellent, the plan met with scant success; as the other great humane societies were already established, and received all who desired to join aid societies. In this movement Dr. von Esmarch did not in any way seek to destory the activity of the Red Cross in time of peace, but, on the contrary, did everything in his power to encourage it, recognizing the vital necessity of all societies being under one management. If the Samaritan Union was established as proposed, supported and sustained by the state, Dr. Kuhn thinks it would tend to disorganize and ruin the Red Cross. Association.—*Med. Rec.*

Mr. Hart's Impressions of the Medical Profession of America.—Mr. Ernest Hart, on return voyage, wrote for the *British Medical Journal* a preliminary report of his visit to this country (Boston *Med. and Surg. Jour.*). His visit was a most pleasant one in every way; and the cordial greetings he received from the various professional bodies left upon his mind, he says, a succession of vivid pictures of the self-respecting originality, the marked regional individuality, the friendly but distinctive competition for progress and leadership of North, South, East and West.

Two of the pictures are of especial interest: "New York, with its wealth of clinical material, its largely developed hospitals and schools, and its prosperous practitioners and consultants, has a certain leadership which some think too self confident, with its roots not yet deeply set. Boston cultivates with proud reserve and academic polish traditional thoroughness and a high university culture."

He criticises in a friendly spirit the causes of the imperfect professional union of different sections of the country, as being of importance not only to this country but to the medical profession at large. He looks upon the present time as a critical period in the development of professional life in America, owing to a tendency to sectional caucussing and special "congresses," which is threatening to limit the usefulness of much scientific activity. It deprives the "physicians," the "surgeons," the "laryngologists," and so forth, of the power for good which comes from mutual and common intercourse, and the cultivation of a sense of unity and affection, amiable criticism and common effort. "So much sectional difference has been aroused," he says, "and the organization of the annual sectional congresses all over tne States has been so assiduously developed, that some difficulty may be found in restoring unity of sentiment and action. Nowhere, however, could the results be more valuable than in America of a common understanding of the relations of the profession to the public, and of their duties to each other. Nowhere does there exist a stronger need or a more useful sphere for medical thought and knowledge in guiding municipalities and executive officers in questions of public health and the government of public institutions, the endowment of science and the maintenance of adequate standards of education and examination. The future of the higher life in America and the development of culture and mental progress, the struggle against commercialism, and the blinding and corrupting worship of the dollar, lies largely with the professional classes. The medical

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tradition is essentially a protest and an antidote against this curse of new communities. The most superficial observer from without must see that this great attribute of medicine and this high duty and privilege are recognized and brought into play in very different degrees in the various centers of the United States. The newest settlements and States are far from being the least developed in this respect."

It was not only medical life which interested him and the great question of municipal sanitation which he so understandingly discussed in his address on the water-supply of Chicago; but the energies, capabilities and resources of our country were a source of great and deepening wonder, as he saw on all sides that which must make all Englishmen proud and happy—"unexampled vigor, unlimited resource, matchless natural marvels, a race of lovely girls, rapidly developing scientific institutions, and a growing passion for research, a continent in which lies the future of the world peopled by an Anglo-Saxon race."

It is his hope on his visit next fall to find a way of being useful in the direction of helping to a federation of the great medical forces of different sections of our country from the union of which in "a mutual and generous intercommunication, may be expected a hitherto unexampled development of professional usefulness and vigor in inspiring social action, in modifying further administration of health matters, in raising and purifying the standards of life, as well as in the advance of the art of healing."

Legsla on for the Prevention of Blindness from Ophthalmia Neonatorum.—In the present day of prophylactic medicine no disease offers a more encouraging field for sanitary legislation than does ophthalmia neonatorum (Boston *Med and Surg. Jour.*). A disease which causes yearly an enormous number of cases of permanent blindness, being undeniably a preventable one, should not escape strict control. Statistics from the various asylums of Europe and America show th an average of twenty-four per cent of all cases of blindn due to contagious ophthalmia of the new-born. Prince shows by a study of collected cases the indisputable fact that the percentage of cases of ophthalmia of inter-partum origin has steadily diminished under improved methods of obstetrical cleanliness. Of the cases which do occur, the number permanently has decreased even more since the importance of immediate care has been made generally known.

Much still remains to be done, however, both by missionary distribution of literature on the subject, as is done by the Hungarian, Austrian and French Governments, and by actual legislation by our States. Switzerland, in 1865, was the first country to take action, with the proud result that Professor Horner could say that during his lifetime no child born after 1865 was admitted to the Blind Asylum at Zurich with sight lost from ophthalmia neonatorum.

In this country New York and Maine passed laws requiring midwives to report reddened or inflamed eyes of children under their care within six hours, under penalty of fine or imprisonment. Bills to effect the same purpose have been introduced this past winter in the Legislatures of Ohio, Pennsylvania, Minnesota, Illinois, and the Dominion of Canada.

A subject of so much importance ought not to be neglected longer in any State which claims to have an interest in the welfare of its children.

A Distinguished Americanist.—Dr. Daniel G. Brinton, the Philadelphia archeologist is supposed to know more about Indian antiquties and languages than anybody else in America. He can converse with fluency in Choctaw, Muskogee, Natchez, Maya, Quiche, Arawack, and other soft-sounding Indian dialects; but is at the disadvantage of being rarely able to find a person accomplished enough to talk with him in those tongues. Dr. Brinton was the first to classify the tribes of American Indians by their languages and he has read all that is discoverable of their literatue.

American Orthopedic Association.—The seventh annual meeting of the American Orthopedic Association was held at the lower hall of the College of Pharmacy, 2110 Lucas Place, September 19, 20 and 21, 1893. Many papers were read and the meeting was a very successful one. The following officers were elected for the ensuing year:

President—Dr. A. M. Phelps, of New York.

First Vice President—Dr. H. A. Wilson, of Philadelphia.

Second Vice-President—Dr. Barry M. Sherman, of San Francisco.

Secretary—Dr. John Ridlon, of Chicago.

Treasurer—Dr. E. G. Brackett, of Boston.

After the election of officers, a vote taken for the place for holding the next annual meeting resulted in the selection of Washington, D. C.

South Western Association of Railway Surgeons.—The South Western Association of Railway Surgeons will meet in St. Louis October 26 and 27. A large attendance is assured and the proceedings promise to be of an unusually interesting nature. The Committee which has in charge the arrangements will endeavor to give the members ample opportunity to witness clinical demonstrations. The following are the officers of the association:

President—Dr. F. J. Lutz, St. Louis, Mo.

Vice-Presidents—Dr. J. E. Tefft, Springfield, Mo. Dr. R. Aikman, Fort Scott, Kan.

Secretary—Dr. C. M. Lutterloh, Jonesboro, Ark.

Treasurer—Dr. E. A. Neely, Memphis, Tenn.

Chairman committee of arrangements—Dr. W. B. Outten, St. Louis, Mo.

Committee on transportation—Dr. N. J. Pettijohn, Kansas City, Mo., Dr. C. A. Smith, Tyler, Texas, Dr. E. F. Yancey, Sedalia, Mo., Dr. H. W. Morehouse, Danville, Ill., Dr. C. H. Yancey, Hannibal, Mo.

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ORIGINAL ARTICLES

The Pathology, Symptomatology and Treatment of Hemorrhoids, Simple and Complicated.

BY THOMAS H. MANLEY, M.D.,

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In other contributions under similar titles, I have, at length dealt with the subject of hemorrhoidal disease; so that at present my efforts will be directed only to wards a review of salient points and the enumeration of types, rather an endeaver to analyze the subject in detail.

It is unnecessary, at the outset, to enter into the mor bid anatomy or the pathological changes in the vascular system and the mucous membrane of the rectum and anus, essential to the formation of simple, common hemorrhoids; therefore the pathology of complicated cases alone will be chiefly considered in the present instance.

Relative Frequency of Hemorrhoids.

Hemorrhoidal dilatation of the veins of the rectum, I have found so common, in the living and dead subject after adult years are attained, that I have come to regard it as practically physiological. It is a species of vascular degeneration. In the anus it first presents itself, for many good and satisfactory reasons. When devoid of complicating elements, hemorrhoids are inoffensive and harmless; so that we may go through life, not knowing that a cluster of hemorrhoidal masses, occupied the edge of the anus, on the interior of the rectum. They constitute a disease only, when they persue the seat of pathological processes, or of an usual type, when we have an atypical condition, or we are in the presence of *complications*.

Varieties of Hemorrhoids.

Anatomical Division.—

1. Veinous hemorrhoids.
2. Arterial hemorrhoids.
3. Mixed hemorrhoids.
4. Internal hemorrhoids.
5. External hemorrhoids.

Pathological Division.—

1. Thrombosed hemorrhoids.
2. Inflamed hemorrhoids.
3. Bleeding hemorrhoids.
4. Ulcerating hemorrhoids.

Co-Incident Complications or Sequellæ.—

1. Anal fissure.
2. Anal fistula.
3. Anal stricture.

Tubercle, syphilis and cancer play an important *role* in many types of piles.

Hemorrhoids become the seat of pathological changes, chiefly through *infection*, either through the mucous membrane, the circulation or the absorbants.

The great preponderance of hemorrhoids are varicose; though the most rebellious types of hemorrhage, from so-called internal piles, are often dependent on a papilomatous or angiomatous state of the arterioles in the submucosa, just within the verge.

A varicose state of the veins of the leg causes cutaneous and muscular atrophy; in the spermatic cord a wasting of the testicle.

In the rectum the sphyncter *externus* and levator ani suffer from the effects of malnutrition, when the walls of the afferent vessels give way. A low grade of inflammation supervenes in which there is a free hyperplasia into the inter-fasicular spaces and parenchyma of the muscle fiber. This undergoes organization with fibrous changes, so that the external sphyncter, in all cases of hemorrhoids, undergoing pathological changes, will be found greatly thickened of a dense consistance and but moderately distensible.

The Usual Termination of Non-Complicated Hemorrhoids.

In response to an immutable law in the economy, Nature in her own time, will dispose of any superfluous tissue, or excrescences, by slow but radical processes. When the element of malignancy is absent and there are simple neoplastic varices at the anus, they will in time disappear of themselves.

Modus-Operandi of Spontaneous Cure.—A primitive hemorrhoid is a tumor like dilatation of a vein with

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fluid blood. This tumor fills and empties, expands and contracts under certain physiological conditions of the anus and lower rectum.

But, when they sustain a pressure from hard, irregular-shaped fecal masses, or are passed down through the sphyncter at stool, and are strangled by its contraction; then congestion and inflammation follow. Microgymes penetrate the intima and the *first* most tangible pathological change is announced by a *coagulation* of the blood.

Now should our patient possess a good constitution and septic influences are escaped, then the more intense the inflammation, the more prompt and radical will be the destruction of the hemorrhoids, and in a short time no trace of them will remain but their shriveled, atrophied stalks.

Many, however, do not run the gauntlet so safely. If the patient be *tuberculous* there is a tendency to a low grade of inflammation following. The work of resorption of the inflammatory products is imperfectly performed. The walls of the hemorrhoid break down and its base is the starting point of an ulcer, a fistula, a fissure, or an opening into an artery.

If our patient is *syphilitic* an inflamed hemorrhoid is the nidus from which an annular spread of hyperplastic changes begin, and should ulceration follow, on account of its painless character, it may work great havoc, or even lead to cicatrization and stricture before one is aware of its presence.

It is not the general opinion of pathologists that hemorrhoids are an exciting cause of cancer or *epithelioma*, but so many cases have come under my observation in which cancerous disease has followed in the wake of hemorrhoids and the proliferating tissue has maintained the character of piles in the embryonic elements that I now no longer have any doubt of the frequent and direct relation.

Septic or *local* processes are more often responsible for hemorrhoidal implication than anything else.

The rectum is the excretory channel and other residence of digestive excrementitious substances of the body. Therefore when a hemorrhoid becomes inflamed, if its surface-epithelium be at all abraded, pathogenic germs are certain to enter and excite suppurative changes. For this reason too, all operations on the anus and lower rectum are inevitably exposed to infection after mutilation of the soft parts, as a clean, aseptic wound in this situation is manifestly impossible.

Symptomatology.

The recognition of hemorrhoids is not attended with any difficulty, for they can be seen and felt. It is only in chronic cases of a mixed character that experience and tact are required to distinguish each type and complications. The symptoms of the malady are not uniform, definite or reliable.

A proctitis limited to the verge or the lower third of the rectum may simulate piles. But clinically it is readily recognized.

Pain, itching and *hemorrhage* are the most constant symptoms. One will usually be able to determine the site of the affected parts by certain signs.

If, for instance, our patient complains much of tenesmus of the bladder we may be confident that the affected tumors are lodged in the anterior wall, and that the vesical symptoms are dependent on the propagation of inflammation, in the male through the prostate. We never have bladder symptoms in the female.

A patient with acutely inflamed piles derives some relief from straining at stool: when he feels them with his finger, and can tell how many there are, and give their size. Polypoid growths of the rectum may simulate hemorrhoids in the symptoms which they give rise to. They are very uncommon and almost invariably have their origin high up. They are not painful, but they frequently have a thick vascular tissue, and by their size produce a constant sense of fullness. I saw a case last summer of vascular polypi of the rectum which by the constant hemorrhage which they kept up reduced the patient to a state of the most profound anemia. They were fully a finger's length above the verge and all had long independent pedicles from the anterior wall of the bowel.

Pain is quite a constant symptom of hemorrhoids. Sometimes it is of a most agonizing character. There is no affection in the anus except fissure which can produce such acute suffering.

Rectal tenesmus is quite pathognomonic of piles in the absence of dysentery. This must not be confounded with another symptom closely allied to it in malignant disease when the patient is the subject of advanced years and has a constant desire to empty his bowel because of a sense of constant fullness. When one comes to us with the latter symptom after middle age it must be regarded a symptom of very serious import.

Itching.—Varices anywhere situated are sometimes the cause of the most furious itching in the legs, the vulva, or the scrotum, as well as in the anus.

Hemorrhoidal itch, however, has characteristics peculiar to it. It is mostly nocturnal and comes on suddenly, but generally in short exacerbations. In children pin worms may excite this state, and so may pediculi in the adult.

Tubercular ulceration of the bowel is often made manifest, chiefly by a sort of an itchy sensation and a feeling of uneasiness. It is never acute, but is constant without sharp exacerbations. In those of a tubercular diathesis we may suspect the true condition, though when in doubt, nothing will decide the matter, except a thorough inspection.

Rectal Hemorrhage, Bleeding Piles.—Hemorrhoidal hemorrhage is of two varieties, namely, one, the most common veinous, and the other, arterial. The former may be recognized by its sparcity in quantity and its color.

But, when blood comes in considerable quantities after an evacuation, of a bright red color, it is arterial, and strictly speaking, is not hemorrhoidal, for it does

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not escape from varices, but papillomata or angiomata.

But in every case of the type under consideration, the common site is low down, near the verge.

It is well to remember that *tuberculous ulcers* are a common source of rectal hemorrhage, and in elderly people blood following a painful stool is strongly suggestive of *cancer*.

In all cases of rectal hemorrhage in those past the meridian of life, a rigorous examination alone will reveal its etiology.

The general symptoms of rectal hemorrhage are the same as those which present themselves after the loss of blood in other districts. Many times one goes on, sustaining a steady depletion, until dangerously exsanguinated before the origin of the leak is discovered.

In aggravated cases of hemorrhoidal bleeding consti tutional symptoms are well marked. Anemia is obvious; the heart palpitates on the least over-exertion or excitement. The patient suffers from giddiness, has flashes of light cross his visual field, with insufferable noises in the ears.

In these serious cases we will find on examination that the spleen is more or less hypertrophied.

Treatment of Hemorrhoids.

Modern advances in science have greatly simplified the operative treatment of piles. In the larger number of simple uncomplicated cases, chalogogue cathartics, one or two doses, with, rest, local bathing, a soothing salve, or lotions, will suffice and our patients promptly recover.

As to consider this class and the various measures of treatment would occupy more space than is permitted, I will pass on to the surgical treatment of aggravated cases. *A thorough examination of the rectum* is an indispensable preliminary to the treatment in all chronic cases.

The plan of treatment which I have advocated and practiced is designated "Pressure-Massage." By it there is no division of the soft parts with consequent danger from secondary hemorrhage or stenosis of the passage from cicatricial contraction.

With the aid of a Paquelin cautery it will succeed in every type of hemorrhoids when all its details are fully carried out.

The procedures may be divided into five stages:

1. Preparation of the parts.
2. Subcutaneous cocainization.
3. Complete anal dilatation.
4. Pressure, torsion and massage.
5. Irrigation and return of prolapsed parts.

In all cases as soon as one begins to arrange for an operation the patient should be given half an ounce of brandy, or its equivalent in wine, every fifteen or twenty minutes before manipulation of the sphincter is commenced; while the parts are being shaved and scrubbed and the rectum is being well cleared by an efficient lavage.

Cocainization.—The index finger warmed and well lubricated is now introduced up to the webbing, being pressed gently but steadily in. Now its tip is flexed so as to give the digit a hook-shape and the sphincter is drawn outward slightly when we take the hypodermic in hand (in the right).

A fresh *one* per cent solution is safe and of ample potency. From *sixty* to *one hundred* drops are enough for hypodermic use in every case. Now the needle is sent in in such a manner and to such a length that its point penetrates the seat of each large tumor and two or three drops are deposited within it. It is then partly withdrawn making one hub and several spokes in four districts. One anteriorly, one posteriorly and one on each side. To make this clearer I may say that the point after being sent home is withdrawn *to*, but *not through*, the integument when it is re-introduced and withdrawn to the surface until a circular area is sprayed.

Hypodermic cocainization, complete *sphincteric dilatation* is commenced. In order not to rupture or lacerate an old, cord-like contracted sphincter one must proceed slowly until all resistance is overcome when the entire hemorrhoidal area of the lower rectum rolls out through the opening. The parts are now well cleansed and dried when they are lightly swabbed with a four per cent solution of cocaine, and in a few seconds we commence the *pressure manipulation* of each pile.

Each one is seized between the thumb and index finger and first so *crushed* that all except the *external coat* is reduced to a pulp, then *fully extended* in its pedicle or base and *twisted*. The extent and thoroughness of force in each case applied will depend on the size of the masses and the thickness of their coats. This part must be radical and complete. We will now *irrigate* with sterilized water, return the crushed masses within the sphincter, introduce an opium suppository, when our manipulations end and dressings are applied.

Bleeding hemorrhoids demand essentially the same technique, only that the bleeding sulci or minute papillomata need touching with Paquelin's cautery.

Conclusions.

The advantages of the above described technique may be summarized as follows:

1. The total dispensation of pulmonary anesthetics which are always attended with more or less danger to life in those suffering from functional or organic disease. A more complete composure of our patient with absence of straining, vomiting, or besmearing of the parts with feces during our manipulations, besides we may succeed with fewer assistants. Certainly in highly sensitive or hysterical individuals ether narcosis may be required.

2. Analgesic dilatation is not so apt to be attended with rupture of the sphincter because, though the pain-sense is annulled, the patient yet preserves sufficient sensation to warn us when excessive force is being employed.

3. As there is no mutilation and no hemorrhage, the

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danger of tetanus, infection, ulcerative fistula and secondary hemorrhage is obviated. Acute aseptic inflammation follows after the hemorrhoids are replaced, which ends in resorption of their contents, so that in a short period nothing remains to mark their former site but short, atrophied stalks.

3. *Shortened Convalescence.*—By this manner, as there are no sequellæ to be feared, the after-treatment is almost *nil.* As a general rule our patient may be about in a few days, or a week, though it is always well that the body be kept in a state of rest and the parts be daily bathed for two or three weeks in severe cases.

4. This method has something more than speculation and theory to support it, for in my hands, in a large number of cases of every type of hemorrhoids, during the past two years, it has invariably succeeded, and in no single instance with which I am acquainted, has it failed, or has it been followed by relapse. I may add, however, that in females it is not as satisfactory as in the opposite sex because they are commonly so refractory to the action of cocaine.

Iodide of Potassium in Actinomycosis in the Human Subject.—Buzzi and Galli-Valerio (*Rif. Med.*, *Brit. Med. Jour.*) prompted by the successful experiences of Thomassen and Nocard, in veterinary practice, and of van Iterson in the case of actinomycosis in a human being, applied the treatment by potassium iodide to a case which came under their observation. In their case, that of a healthy laborer, the disease affected the whole right side of the face from the temple to the clavicle. It had been of some mounths' duration before it came under close observation, and had undergone treatment by poulticing and free incision without being in any way favorably influenced. It was then that the diagnosis of actinomycosis was established, and the iodide treatment commenced. On January 9th, 1893, daily doses of 30 g. of pot. iod. were commenced, and save for a slight cutaneous eruption which appeared on the fourth or fifth day, no untoward effects followed its use. On the contrary improvement rapidly became manifest. The incisions which had previously been discharging quantities of yellow pus, secreted less freely, and showed distinct signs of healing; the swelling became less marked, and patient could soon open his mounth. All pain disappeared, and by March 5th, the patient was well enough to leave the hospital. Seen again on April 4th, the cure was pronounced complete; all swelling had disappeared, the fistulæ had cicatrized perfectly, and the skin was freely movable over the subjacent parts save in one small spot. The movements of the jaw were normal, and the patient appared to be in perfect health. The authors therefore recommend highly the treatment of this disease by large doses of iodide of potassium, kept up till all signs of the affection have disappeared.

EDITORIALS

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Retention of Urine After Operations.

Retention of urine is a symptom so often observed after operations that it appears strange that text-books have so far paid little or no attention to the same. According to A. Guepin who has looked up the literature upon this subject and published the result of his researches in the *Gaz. des. Hop.*, urinary retention may occur at every age after puberty, it never has been observed before the fifteenth year. It is most frequently observed after operations upon the belly and the lower extremities and it becomes rarer the farther away from those parts the operation took place; after operations upon the face and upper extremities it has been observed very rarely. There are two forms of retention which differ distinctly in a clinical sense, these are the indolent and the painful forms; the former occurs in individuals with healthy urinary organs and the latter in individuals whose urinary apparatus is diseased. The duration of retention varies a great deal.

The indolent form usually disappears after the first catheterism; the second form may last from eight hours to three days and sometimes longer.

Various hypotheses have been advanced to explain the production of this kind of retention, some of them being of a rather adventurous nature. Swelling of the urethra, the dressings, pain, paresis of the abdominal muscles, anesthesia, etc., have been made responsible for the occurrence. Guepin mentions three different causes of retention after operations:

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1. Spasm of urethra particularly of the bulbous portion.

2. Paresis of bladder.

3. Posture of patient, many persons not being able to urinate in the attitude of lying immovably upon the back. The treatment consists in change of posture and, if this is insufficient, a warm clysma, and as a last re sort catheterization.

Diagnostic Value of the Diazo Reaction.

Dawson, Dublin University, presents an instructive article upon the above subject and the following points may be specially noted (*Pac. Med. Jour.*): A saturated solution of sulphanilic acid in strongly acidulated water is first made; hydrochloric acid is now employed in the proportion of one to eight. To this solution is added, just before use, a few drops, about five minims, to the ounce, of a very dilute solution of sodium nitrite (1 in 200). The test is applied thus: A test tube is filled to about one-third of its height with urine and an equal quantity of the test solution is added. The resulting fluid may assume a yellow color, which constitutes the first part of the reaction, but this does not invariably occur by any means. If now, however, some liquor potassæ be added, a more or less deep blood or port-wine color at once appears. This constitutes the second and really significant part of the reaction. The third and last part consists in the separation of a greenish black precipitate, which forms a layer on the surface of the high-colored sediment when the tube has been allowed to stand twenty-four hours. Urine which does not show the reaction assumes some shade of yellow or orange on adding the alkali, and on standing throws down a precipitate which is of no particular color.

Having tried the test with a great number of different diseases, Ehrlich came to the conclusion that, with the exception of phthisis, the morbid conditions in which the reaction is obtained are always of a febrile nature, and these he divided into three groups:

1. Diseases in which the reaction is constant, as enteric fever and measles.

2. Diseases in which it occurs with greater or less frequency, according to the nature of the attack, as erysipelas, miliary tuberculosis, septicopyemia, pleurisy, intermittent fever, etc.

3. Diseases in which it is scarcely ever seen.

The three diseases in which it was found constantly in a great number of cases, are enteric fever, in which Ehrlich failed to obtain it in only two out of many cases, one of the two being a very mild attack; measles, in which it was never missed, and phthisis in which it occurs constantly in the acute form, and also, though with long periods of intermission, in the chronic. In enteric fever it was found in many cases all through the attack, and one or two days over the time of the subsidence of the fever, in others it disappeared at the beginning of the remissions, or more rarely from three to five days before, whilst very seldom, and that usually in the lightest cases, it was found merely in the first three or four days of observation. In measles it invariably appeared at the commencement of desquamation, *i. e.*, about the crisis, and usually, though not invariably, during the eruptive stage. In acute phthisis it was, as a rule, markedly present during the whole course of the disease. In chronic phthisis it was present during periods of varying duration and this was the only disease in which it was found absolutely unconnected with febrile disease.

From these and similar data Ehrlich drew the following conclusions, amongst others:

1. The reaction is one of the most constant symptoms of enteric fever from the middle of the first week on, so that its absence renders the diagnosis doubtful.

2. The reaction cannot be used for the diagnosis of enteric fever from diseases of the second group.

3. The occurrence of the reaction in croupous pneumonia indicates the supervention of complications.

4. The presence of the reaction for a length of time and in the absence of fever points to phthisis.

Dawson concludes his able paper by saying: The conclusions then, which seem to be warranted by this investigation, are briefly these:

1. The diazo is found in the great majority of cases of enteric fever at some period between the fifth and twenty-first days, and is more constant in that disease than in any other (of those tested), except measles, and perhaps acute phthisis, so that, with these reservations, its presence affords a presumption in favor of, its absence a much stronger presumption against, such a diagnosis.

2. That the reaction cannot be used either positively or negatively to distinguish enteric fever from phthisis or measles, and that the presumption which it affords against typhus is small.

3. That it is nearly or quite constant in measles, but absent in at least many cases of roetheln, and may, consequently, be used to distinguish between them.

4. That the substance causing it does not indicate its presence by any peculiarity in the color, odor, deposit, reaction or specific gravity of the urine, nor by the presence of albumen, sugar or indican.

5. That it is not due to free acetone, nor to a direct product of the bacillus typhosus of Eberth.

Catheterization of the Ureters.

Howard A. Kelly, M.D, Professor of Gynecology and Obstetrics in the Johns Hopkins University, has contributed a valuable article upon this subject in the *Annals of Gynecology and Pediatrics*, of which we take the liberty to reproduce the essentials:

Prof. G. Simon was the first to indicate a way by which we might collect the urine as it came from the kidney by a catheter introduced into the ureter, thus eliminating vesical contamination and differentiating between the two kidneys both as to the quality and quantity of urine. Prof. Simon's method involved in-

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cision of the external meatus, followed by dilatation of the urethra sufficient to admit the index finger into the bladder, by means of which the ureteral orifice was sought out, and under its guidance a slender catheter introduced into the bladder and guided up the ureter.

The serious objections to this plan are that the catheterization thus becomes a rather formidable operation, and the stretching of the urethra in women to a sufficient size to admit a finger will certainly be followed by incontinence in a large number of cases. Pawlik, now professor in Prag, obviated all these objections by demonstrating landmarks in the vagina which serve to locate the ureters, and also by greatly improving the catheter. He thus made it possible to catheterize the ureters "free-hand," by sight alone, without any preparatory operation.

Prof. Saenger, of Leipzig, about this time had demonstrated the fact that the terminal extremities of the ureters could readily be palpated per vaginam in almost all cases.

The writer has devised an improved ureteral catheter, sound and bougie. I have performed various ureteral operations, such as opening and draining the ureter into the vagina while treating ureteral stricture, ureterectomy, etc., but I have no claims of originality in this field which deserve to be mentioned along with the names above cited.

Instruments and Accessories.

Two Kelly's ureteral catheters.

One small calibre female catheter.

One syringe, with a graduated barrel, of 4 or 5 oz. (120-150 c.c.) capacity.

Eight ounces of a decided blue aniline solution.

One Sims' or Simon's speculum.

Two minim or cubic centimeter graduates of about 60 minims capacity.

Many patients can be catheterized without anesthesia. The buttocks should be brought to the edge of the table, and the legs flexed upon the abdomen. The operator then catheterizes the bladder. This urine is set aside in a conical glass vessel for comparison with that to be obtained from the kidneys. The value of this will be seen when I say that I have repeatedly been able, upon drawing purulent or bloody urine from the bladder, to produce the same shade of red or yellow as that of the vesical urine by mixing pure urine obtained by the ureteral catheter from one kidney with the bloody or purulent urine drawn from the other. By careful palpation the ureters are located anteriorly through the vaginal wall, noting especially whether they are well forward under the bladder, or, as often found, abnormally far back in the pelvis.

The bladder is then distended with from 5 to 7 oz. (150-210 c.c.) of the aniline solution. The posterior vaginal wall is retracted with a speculum, exposing the anterior wall up to the cervix, while the bladder is being injected.

The object of this distension of the bladder is twofold: in the first place it does away with all the rugosities of a contracted bladder, which hinder catheterization, if they do not render it impossible. The only rugosities left are the prominences on either side, through which the mouths of the ureters open into the bladder by a little slit, running obliquely backward in a line with the course of the ureters.

The second reason is well exhibited pictorially by Prof. Pawlik, who was the first to demonstrate that the curved folds which cross the anterior vaginal wall out to the lateral walls and around toward the cervix are valuable landmarks in finding the ureters, which lie parallel to and just above them. These are appropriately called for this reason the "ureteral folds." They are brought out distinctly by moderate distension of the bladder.

An assistant should determine that the catheter is clear by placing the end in water and blowing through it without touching it with his lips. The metal plug, attached by a short chain to the catheter, is coated with a little vaseline and inserted in the outer end, thus keeping the aniline solution from filling the lumen of the catheter when it enters the bladder.

It is now evident that if clear or straw colored fluid escapes through the catheter it must be urine, as the deep aniline color of the fluid in the bladder renders deception from that source impossible. When the catheter is introduced as far as the bladder, touch and sight assist in its further introduction into the ureter.

By turning its point forward and elevating the handle, a slight prominence is produced on the anterior vaginal wall. Throughout the manipulations of the catheter this is the constant guide to the vesical orifice of the ureter. The first step after the introduction of the catheter into the bladder is to try to locate the ureteral eminence by the sense of touch communicated from the tip of the catheter.

To this end the movements of the point on the anterior vaginal wall are closely watched as it plays over the base of the bladder. It is made to gently glide in a fore and aft direction from the neck of the bladder to cervix, in the median line, a little to one side, a little further out, and so on until it reaches the ureteral eminence, when it is distinctly felt to trip, jogging the thumb and finger in which the catheter is held.

The same movement is repeated until this point is exactly located. The attempt is now made to introduce the catheter into the ureter by carrying the handle to the opposite side, thus directing the point toward the posterior lateral wall of the pelvis, when the catheter is withdrawn slightly, and with its point still down, but turned a little more toward the side, is swept downward, outward and backward in the direction of the ureteral prominence. With each of these sweeping motions the catheter is rotated until the point is directed fully outward or slightly upward.

This movement, employed in engaging the catheter in the ureter, may very appropriately be called fishing for the ureter.

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As soon as the catheter enters the ureter its course is fixed, and the tactile sense at once recognizes that it no longer lies free in the bladder as before. If the catheter is released for a moment the handle does not drop, but remains in a fixed position and forms an angle, of about thirty degrees, with a line projected from the urethra. The catheter should be introduced into the ureter until its point reaches the wall of the pelvis, when the plug is removed from the end. A catheter may now be introduced into the opposite ureter and both thus catheterized at the same sitting.

On account of the partial occlusion of the urethra by the first catheter the second is slightly more difficult to introduce.

If it is desirable to carry the catheter higher, even over the brim of the pelvis and up to the pelvis of the kidney, the bladder can be emptied by introducing a small glass catheter under the two ureteral catheters. The contracted bladder now forms a movable organ, which can be displaced upward without harm in manipulating the ureteral catheters.

With an index finger introduced into the rectum the catheter is lifted up and guided while it is pushed on up over the pelvic brim and up to the pelvis of the kidney.

As soon as the plug of each catheter is withdrawn an assistant notes the time so as to be able to tell afterward just how long the urine has been flowing from each kidney. The minim graduates are held below the catheters to catch the urine. An average of 1500 c. c., or about three pints is the normal daily excretion of urine. If from both catheters one cubic centimeter from one catheter is passed, the number of minutes in a day multiplied by this amount gives 1440 c. c., which is practically the normal excretion. I have frequently found just this proportion upon estimating the day's urine by the amount collected in a few minutes by the catheters.

Oftener the amount falls much below normal. In disease there is frequently a marked difference in the amount of urine collected from the two sides. One side may flow freely and the other discharge no urine, although this may be due to stricture, which I have demonstrated by pushing the catheter up beyond the stricture and over the brim of the pelvis, when immediately several ounces escaped. One side may be alkaline and the other acid; one may be bloody or pure blood and the other clear urine; one may be pus and the other urine. I have demonstrated all these variations a number of times.

The urine evidently flows from the kidney in little wavelets, for it does not appear at the end of the cathe ter in from one to eight or ten minutes, and then it only escapes by drops at intervals of a few seconds to a minute or more.

Fifteen minutes is an average time for the duration of the catheterization. The urine of each side is then marked and set aside for examination The catheters are plugged and withdrawn and the urine in each of them is added to that in the graduate from the same side. A little patience and tact, as I have said, are all that are needed to succeed in this little maneuver, which adds so much to the possibilities of gynecology, as it brings into this special branch of surgery renal diseases in the female.

CORRESPONDENCE

Acute Dyspepsia.

Editor MEDICAL REVIEW.—I take this opportunity to question my brother M.D.'s through the columns of your valuable paper, of which I acknowledge I am a reader and great admirer, in regard to a case which it has been my fortune to have had care of during my life as a physician and which as yet I have been unable to cure, in fact, the patient has gradually been getting worse since 1888. Her history is about as follows: A very healthy, robust young girl of 18, whose weight was about 130 pounds, became poisoned by eating canned fish, salmon, and was confined to her bed for about three weeks. On getting up she had every symptom of acute dyspepsia, and was treated with dilute hydrochloric acid before, and pepsin after eating, which relieved the condition excepting a severe headache which would come on at intervals and only be relieved by the use of morphine followed by a laxative aud for such has been used cascara sag., calomel and sodii phosp., U. S. P. comp. cath. pills, ℞. tr. bellad., tr. hyoscy.-cascara sag. et ol. anisi. M. Sig. Pro dose, sufficians. Then has followed a tonic of iron, of quin., and of both combined with the addition of phosp. and strychnine, of stout, of port wine, of malt, potassii iodidi, and of the change of climate and residence at Mineral Springs, and mineral waters, also electricity and a milk diet exclusively. And with all this medication she suffered for a period of five years, during which time she has become a mother, which relieved the menorrhagia and dysmenorrhea of which she complained bitterly, which could not be relieved by bromide and chloral or anything else.

With so much of the history and treatment I ask your suggestion for any treatment for her at present. A mother whose weight is 110 pounds, whose appetite is extra, but who is punished severely with the increase of a constant headache by eating anything, yes, by even taking a drink of water, tea or milk, who complains of no fullness after eating unless a very hearty meal is eaten, when she takes one-half teaspoonful of table salt, which relieves the fullness better than pepsin. She has no acid eructations, she has a tendency toward constipation, she has no soreness at any point, no cough, no difficulty with her water, no vomiting nor nausea at any time, sleeps well, but she constantly complains of aching of knees, a tired feeling and headache.

I would be pleased to answer any question in relation to this case which may be asked and I would be overjoyed to read in the MEDICAL RENIEW a line of treatment that would cure my patient.

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ABSTRACTS

Insanity from Intoxication as a Defence to Crime. — The rule laid down by the Supreme Court of Kansas (*Med. News*) concerning the responsibility of a person who, at the time of the commission of an alleged crime, has sufficient mental capacity to understand the nature and quality of the particular act or acts cnnstituting the crime, and the mental capacity to know whether they are right or wrong, that he is generally responsible if he commits such act or acts, whatever may be his capacity in other particulars, was forcibly challenged in the case of State v. ONeil, just reported (33 Pacific Reporter, 287). The theory of irresponsibility from an irresistible or uncontrollable impulse was ably presented. Several authorities were cited and the Court also referred to a lengthy article "On the Legal Aspect of Insanity," published in 1 N. W. Law Rev. 1, which stated, among other things, that "it would be difficult to crowd into the same compass more erroneous ideas than are found in the charge of the Court in the Guiteau case." The Court said that it had examined these authorities and had also read similar articles in the magazines upon legal or forensic medicine, which support and even go further than the views expressed in the Law Review.

Some of the articles in the medico-legal journals assert that all crimes result from heredity, and, therefore, that all persons committing alleged offences should be considered irresponsible, and be subjected to treatment for disease only; not for crime. The decisions cited were called sporadic cases, and against the overpowering weight of authority. As declared by this Court early in the State's history: "It is possible that an insane, uncontrollable impulse is sometimes sufficient to destroy criminal responsibility, but this is probably so only where it destroys the power of the accused to comprehend rationally the nature, character, and consequences of the particular act or acts charged against him, and not where the accused still has the power of knowing the character of the particular act or acts, and that they are wrong. Indeed, it would seem dangerous to society to say that a man who knows what is right and wrong may, nevertheless, for any reason, do what he knows to be wrong without any legal responsibility therefor. The law will hardly recognize the theory that any uncontrollable impulse may so take possession of a man's faculties and powers as to compel him to do what he knows to be wrong and a crime, and thereby relieve him from all criminal responsibility. Whenever a man understands the nature and character of an act and knows that it is wrong, it would seem that he ought to be held legally responsible for the commission of it, if in fact he does commit it." And in a later case the Court adopted the views thus expressed upon uncontrollable impulse. Nor is it now inclined to adopt the theories of psychologic enthusiasts to overthrow the long-established criminal practice in this class of cases, which is based on human experience from earliest times The Legislature might, very appropriately, pass an Act permitting the State or the accused to have the question of insanity tried before the main trial upon the information or indictment. In such a case a jury of physicians might be required to be summoned to determine the sanity or insanity.

In the case under consideration evidence was offered upon the part of the accused showing that he had inherited an appetite for intoxicating liquors; that he had indulged that appetite during life; and that the habit for drink had grown upon him so that he had the reputation of being an habitual drunkard. It was further insisted, the evidence tended to prove, that at the time of the killing he was insane from alcoholism. The Court, however, instructed the jury, among other things, that voluntary intoxication is no defence to murder in the first degree, unless such intoxication should be so extreme as to rob the mind of the power of premeditation and deliberation. Hence, if it was found that the accused committed the act of killing as charged, and that at the time that he did so he was in a state of intoxication caused by his voluntary action, he was guilty of murder in the first degree, unless it should be further found that such intoxication was so extreme as to prevent his mind from the exercise of deliberation or premeditation; in which latter case he would be guilty of murder in the second degree, or manslaughter in some of the degrees. If the jury should believe from the evidence, beyond a reasonable doubt, that the accused did the killing at the time that he was so drunk as to be incapable of entertaining deliberation and premeditation, and also was incapable of entertaining the elements of purpose and malice, and that he had no previous knowledge that when intoxicated that he was liable to commit acts of violence upon his wife, whom he was charged with murdering, or others, as a consequence of such drinking, it could not find him guilty of murder in either the first or second degree.

When a person is shown to have been in the habit of becoming intoxicated, and it is further shown that when intoxicated he is likely to commit acts of violence upon his fellows, and endanger their lives or safety, and such person is shown to have knowledge of such fact, and, having such knowledge, voluntarily becomes intoxicated, then, and in such a case, such person would be as fully and entirely responsible for acts of a criminal nature committed by him while in such state of intoxication as though the act had been committed by him while not intoxicated. When insanity is set up as a defence to crime committed, the rule that the jury must ever keep before their eyes and minds in determining the responsibility of the accused is this: "Was the accused, at the time of doing the act complained of, conscious of the nature of his act, or did he know that it was wrong to do it?"

Bishop, in his work on Criminal Law, says: "When a man voluntarily becomes drunk, there is the wrong-

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ful intent; and if, while too far gone to have any further intent, he does a wrongful act, the intent to drink coalesces with the act done while drunk, and for this combination of act and intent he is liable criminally. It is, therefore, a legal doctrine, applicable in ordinary cases, that voluntary intoxication furnishes no excuse for crime committed under its influence. It is so even when the intoxication is so extreme as to make the person unconscious of what he is doing, or to create a temporary insanity." "Again, the law holds men responsible for the immediate consequences of their acts, but not ordinarily for those more remote. If, therefore, one drinks so deeply, or is so affected by the liquor that for the occasion he is oblivious or insane, he is still punishable for what of evil he does under the influence of the voluntary drunkenness. But, if the habit of drinking has created a fixed frenzy or insanity, whether permanent or intermittent—as, for instance, delirium tremens—it is the same as if produced by any other cause excusing the act; for whenever a man loses his understanding, as a settled condition, he is entitled to legal protection, equally whether the loss is occasioned by his own misconduct or by the dispensation of Providence." If drunkenness produces insanity through delirium tremens or *mania a potu* or other disease, and the accused at the time of the homicide has no sufficient capacity or reason to enable him to determine between right and wrong as to the particular act he is doing, or has no power to know that the act is wrong and criminal he would not be responsible. In cases of delirium tremens or *mania a potu*, the insanity excuses the act, the frenzy being, not the immediate effect of indulgence in strong drink, but a remote consequence superinduced by antecedent drunkenness.

Formanilid: A New Analgesic in Laryngeal Diseases. — J. Preisach found (*Wien. Med. Presse*) that, after insufflation, pain in swallowing subsided in a few minutes, and that the effects continued from two to sixteen hours, usually ten to twelve. Palpitation of the heart and depression occurred in one instance, but lasted only a few seconds. With the anesthesia of the mucous membrane its reflex irritability is likewise subdued. He finds it as active as cocaine, and much more enduring in its effects A. Bokiai (*Ibid.*) recommends it in painful inflammations, as tonsillitis, pharyngitis, etc. M. Neuman first found biting and then numbness of the tongue from a twenty per cent solution, with pallor and analgesia of the mucous membrane, the effects lasting an hour or an hour and a half. —*Record.*

Medicine at the Columbian Exposition. —The following interesting descrsption of Medical Exhibits at the Worlds Fair by the *Medical News* we take the liberty to reproduce in its full text:

On the interior of the great dome of the Administration Building of the Columbian Exposition, at Chicago, hang eight bronze tablets commemorative of the eight events that most contributed to make our present civilization possible. One bears the name Newton, one Copernicus, names connected with the establishment of the principle of inflexible law and order in inorganic nature. One tablet celebrates the introduction of gunpowder, one the discovery of printing; one bears the name Watt and the date of the invention of she steam-engine, one the name Morse—to whom is due our present system of rapid transportation and communication.

But perhaps no physician will fail to see the significance in promoting our present economic condition of the event celebrated by the tablet on the north wall:

JENNER

DISCOVERED THE PRINCIPLES OF

VACCINATION IN 1796.

Europe might have thrown aside fatalism and superstition and become imbued with the idea of the stability and inviolability of Nature's laws; she might have printed books and papers; she might have obliterated feudalism with gunpowder and travelled by steam controlled by the electric telegraph; nevertheless, without that security that vaccination has furnished from a pestilence we know now only by name, the industry and the wealth of to-day would be impossible. It is, perhaps, worthy reflection that nothing so much threatens the usefulness of this great exhibition as the possibility of an epidemic of Asiatic cholera, and to prevent such an epidemic we have only the uncertainty of quarantine.

Every physician who visits the Exposition and notices the fact that there is no combined medical exhibit will regret the lack of organization or lack of spirit that has allowed this great opportunity of advancing our professional interests to slip by unimproved. In the World's Congresses that are held in the Art Institute, a a place was assigned to medicine, but it was not filled. It cannot be argued that the meeting of the American Medical Association and Pan-American Congress, or the World's Congress at Rome, fills the place that the management of the Exposition proposed.

The hospital service for such emergency cases as the erection of the buildings for the Exposition naturally required has been improved and extended for the emergency work that now comes with the throngs of visitors. The emergency hospital is under the supervision of a medical director and a staff of thoroughly equipped physicians, every one of whom has had hospital service, most of them in the Cook County hospital The hospital itself, though not an exhibition, is well worth the attention of medical visitors, and medical men will be received without formality. The equipment and furnishings are good, and the nursing is a fair representation of the nursing of the best hospitals in the country. The ambulance department is well manned,

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under the direction of a physician who has been thoroughly trained in the theory and practice of rendering first aid to the injured. Unfortunately the ambulances are of an antique, delivery-wagon pattern, similar to those that are being worn out none too fast in all of our large cities. Their inadequacy has lately been tested in an accident that threw upon the ambulance service the transportation to the hospital of fifteen or twenty injured painters and decorators.

Perhaps the most illustrative medical exhibit, and one that is well worth a protracted study, is that of the United States Army in the model hospital just south of the United States Government Building. The first floor of this hospital is fitted out with a drug-room, a supply-room, and an office, and the ward itself contains a single model bed. The remainder of the room is filled with an exhibit from the United States Army Museum at Washington. It will require a considerable amount of time to properly study this exhibit, and, as there is usually a very great crowd in the rooms, physicians are advised to visit them early in the day. On the second floor of this hospital is a clinical laboratory in working order. A modest notice upon the stairway excludes all visitors except members of the medical profession; but anybody who chooses can go into the laboratory without a pass or without formality. A polite attendant will answer all questions that are asked in relation to the working of the laboratory, and a careful study may be made of this laboratory by making application for the opportunity from the officer in charge.

In the south end of the gallery of the Liberal Arts Building, the colleges and universities have their exhibit. The medical man will find much to admire in the exhibit of the Johns Hopkins University. The alcove in which this exhibit is placed is a good resting-place after a long tramp. All of the publications of the University are on tables and can be consulted. There are a few interesting exhibits from the medical departments of Harvard University, the University of Michigan, the University of Pennsylvania, and Columbia College; but we regret that the same spirit has not been manifested in the exhibits of the medical departments of these Universities as is to be seen in the exhibits of other departments of the same institutions. The veterinary department of the University of Pennsylvania has a very much more instructive and attractive exhibit than the medical department itself. In none of these exhibits is to be found a display of the work of medical students, and in fact nothing that shows the character or quality of medical education. From the standpoint of a medical teacher, there is no exhibit from these schools worthy the names and reputations these institutions carry.

The most instructive exhibit of the science of medicine is that of the twenty-one German universities. This display is to be found in the second and third galleries of the German section of the Liberal Arts Building. The German educational exhibit is shut off from the general public, and the medical visitor can have an opportunity of studying it only by giving his card to one of the German Imperial Guards, who patrol the exhibit, and requesting him to take it to the commissioner in charge. In this way an escort can be secured and every opportunity to study the marvellous exhibit that these universities have made. This exhibit is particularly rich in the department of medicine. It includes not only a careful study of the educational methods and curricula of the medical schools, but also a full account and fair exhibition of the material equipment of some of these universities. The equipment and material for anatomic study, including histology, is elaborately laid out in one section showing all of the instruments, manikins, preparations, microtomes, and microscopes used in this department, not only at the present time, but in past years. In the department of bacteriology, living and growing specimens are to be observed from day to day, mounted with special reference for exhibition and demonstration to classes. All of the necessary equipment for this department is also in working order, manufactured in various styles and arranged in the best manner for exhibition. The operating surgeon and gynecologist will also see the identical furniture and equipment of the best operating rooms in Germany, with photographs and plans of hospitals. The pathologic department is, as we should expect very rich. The specimens are well describee in a catalogue, which will be furnished the student on application. Although other exhibits are much more brilliant and, upon the first view, more attractive, the bibliographic exhibit is perhaps the richest of all of the exhibits of the German universities. In medicine this exhibit is naturally very large and choice, and will well repay a careful and critical study, in spite of the fact that the three or four great libraries of the United States possess much of it on their shelves. Such universities and colleges as are entitled to this consideration may, during the progress of the Exposition or soon afterward, receive a handsomely printed account of the exhibition of the German universities prepared especially for this occasion. This series of handsome quarto volumes, of which but one volume has appeared, will be a lasting monument of this splendid educational work that Germany has so well accomplished.

In the gallery of the Liberal Arts Building the camp-followers of medicine have made grand exhibitions, which will attract much attention. Everyone will be interested in the exhibition of the manufactures of optical, chemical, and physical instruments. These exhibitions will be found in the departments of the various foreign countries and in the north gallery of the Liberal Arts building. The exhibition of the Swiss instrument-makers is, however, on the first floor in the Swiss section. Pills, powder, surgical instruments, and office appliances are elaborately exhibited in this gallery.

All appliances relative to public and domestic hygiene, to charities, correction, and reformatory institutions, are exhibited in the south end of the Ethnological

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Building. Here are to be found the exhibits of the principal hospitals. Special attention should be given to the exhibits of the Johns Hopkins Hospital and the Boston City Hospital. Much valuable information for the hospital man will be obtained from these exhibits, and hospital wardens and managers will here find a great many valuable hints in hospital management and equipment.

The State Board of Health of Massachusetts has made one of the most attractive and instructive exhibits, and here the physician will receive vrluable help in his study from the courteous attendants, all of them officers of the Board. This valuable exhibit is one of the most suggestive in the line of life saving. A study of the work of the various charitable and reformatory institutions, whose attractive exhibits fill much of this building, is urged upon all physicians, whether their interest has been already aroused by practical study of these subjects or not. Attention is called to the exhibit of the Philadelphia Children's Aid Society, which has done such marvellous work in providing country homes for destitute children, and thus not only added much to life and happiness, but aroused alarm and consternation in the ranks of professional charity-mongers.

It is not unlikely that at the next session, the Legislature will see its way clear to a complete abolition of all maritime quarantine laws, and the relegation of the State and city health authorities to their more appropriate functions of supervising local sanitary conditions. The National Government is abundantly able to take care of a maritime inspection.

Auto-Intoxications in Mental Diseases.—There has been of late considerable speculation respecting auto-intoxications in the psychoses. Such speculations have been stimulated by Professor Bouchard's researches on the pathogenic role of the auto intoxications in general.

Dr. Kellogg, of Flushing, N. Y., in the New York *Medical Journal* "considers it probable that a considerable proportion of mental disorders have a toxic origin." In alcoholic, saturnine, and some other forms of pois oning the dependence of the mental disturbance upon the poison is recognized, and he contends that certain auto-intoxications with ptomaines are probable causes of insanity. The toxic albumoses have been found in the urine in cases of insanity. Why, he asks, may not the autogenous poisons enter the circulation and act directly upon the central nervous centres with sufficient toxic force to produce mental disturbance?

Dr. Rohe, of Catonsville, Md., in inquiring into the relations existing between pelvic disease and psychical disturbances in women, (*Journal of the American Medical Association*) points out the frequency with which bodily conditions influence mental states, and shows that "a torpid condition of the intestines, Bright's disease, putrefactive processes in the intestinal canal, etc., might give rise to melancholia and other disorders of the mental functions,"

Dr. H. M. Hurd in an article "On Post Febrile Insanity" in the *Journal of Insanity* studies the delerium of fevers and the psychoses developing from specific infections, and Dr. G. T. Tuttle, of Somerville, Mass., reports the results of the examination of the urine in two hundred consecutive cases in the McLean Asylum (*Journal of Insanity*). Albumen and casts were found in 55 cases, albumen alone in 64 cases. He collects statistics from various pathological reports of hospitals and finds that in about 40 per cent of autopsies in the insane, kidney disease was found, and concludes that chronic nephritis [uremic poisoning] is sometimes the cause of mental aberration which may be called insanity.

The subject was discussed at the Fourth Congress of Mental Medicine held at Rochelle in August, 1893. Regis, of Bordeaux, and Chevalier-Lavaure, referees, stated that they had been working on the line of the autogenous poisons, and had made many chemical and clinical researches to elucidate the relation of auto-intoxications to mental diseases. The toxicity of the urine was found to be diminished in maniacal states and augmented in melancholia. The urine of maniacal patients when injected in animals produces excitation and convulsions; that of melancholic patients, restlessness, dejection and stupor. There is often in insanity as in eclampsia an inverse relation between the toxicity of the urine and that of the blood, the latter being hypotoxic when the urine is hypertoxic, and *vice versa*.

Under the head of "Facts of Clinical Order," these authors consider the psychoses of acute infectious diseases, of visceral diseases, and of diathetic diseases:

1. In respect to the psychoses of infectious diseases (typhoid fever, eruptive fevers, influenza, erysipelas, cholera, puerperal fever) the sum of researches thus far made goes to show: First, that from a pathogenic point of view, these mental disorders are the result either of direct action of microbes or of their indirect and mediate action by the toxines which they secrete; second, that from a clinical point of view, they may present two aspects. In the febrile stage, the psychosis is an acute delirium, resembling the alcoholic; in the post-febrile stage, it is of an asthenic character, a state of mental obnubilation and confusion (Verwirrtheit). The referees think that a third form of infectious psychosis must be admitted, a form intermediate between those above mentioned, with the symptomatology of paralytic dementia, and which they call pseudo-general paralysis or infectious general paralysis; and they ask in this connection, if most cases of typical paralytic dementia may not be the consequence more or less remote of an infectious disease? However this may be, the characteristic symptom of infectious psychosis, in all its forms, seems to be intellectual disorder, mental confusion, without doubt the result of the impregnation of the temporary inhibition of the cerebral cells by toxic agents. Generally the psychosis thus produced is susceptible of cure.

2. The visceral psychoses are also believed to be in

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great measure the consequence of auto-intoxication. Nevertheless, experimental researches have not been pushed far in this direction, and in what concerns particularly the psychoses resulting from digestive disturbances, we yet know very little, having only certain imperfect data as to the concomitant alterations of the gastric chemism and the toxicity of the intestinal contents. We have more satisfactory data regarding hepatic and nephritic insanities, and it is clearly established to-day by the researches of French authors that these psychoses are at their highest mark the result of an autochthonous poisoning of the organism, of an auto-intoxication. As for the clinical character of these visceral psychoses, it may be affirmed that in cases where the intoxication is acute, the mental disease manifests itself habitually under the form of an acute toxic delirium like alcoholic delirium (this is the case in uremic poisoning); when the intoxication is slow and chronic the state is one resembling melancholia, or, more rarely paralytic dementia.

3. The diathetic psychoses resemble acute toxic delirium, and in the interval of attacks they frequently manifest themselves under the form of general paralysis or paroxysmal mania more or less periodical, and almost always with melancholic character. The referees have also noted that these paroxysms of madness appear to correspond to variations in the composition of the liquids of the organism (hypoazoturia, hypophosphaturia, oxaluria, etc.), notably to discharges of uric acid, frequent precursors of the end of the crisis, and also to modifications in the urinary toxicity which is found to be inferior to the normal.

Under the head of "Facts of Therapeutical Order," the referees state that the antiseptic treatment, general or local, often gives most excellent results.

It is true that in the treatment of the psychoses of acute infectious diseases a tonic and supporting regimen is necessary to combat the state of exhaustion and inanition, the agents of infection being unknown; but in the visceral psychoses, linked to diseases of the stomach liver, kidneys, etc., very good results have been obtained from the employment of purgatives, lavage of the stomach, and antiseptics.

At the same meeting, Ballet, of Paris, gave some interesting facts concerning the toxicity of the urine of insane persons, which were strikingly confirmatory of data previously furnished by other authorities. At the same time, he cautions against exaggerating the importance of these researches; the study of urinary toxicity in the insane has without doubt its utility, but it would be impracticable to found nosological distinction on this alone. In one instance, cited by him, the toxicity of the urine was extreme, the patient was an hysterical girl who manifested no delirium or mental aberration, and had no apparent disorder except hysteria.—Boston *Med. and Surg. Jour.*

Impregnation During the Puerperium.—Kronig (*Centralblatt f. Gynakologie*) at a meeting of the Obstetrical Society of Leipzig, March 20, 1893, reported the following case:

The patient, twenty-two years old, healthy, had always menstruated regularly every four weeks. The birth of her first child took place July 4, 1892: the child was suckled by the mother for ten days, and throve. On the eighth of July, four days post partum, coitus took place, followed by sexual abstinence for three months: the menstrual periods did not appear. Fetal motion was first felt in November, 1892, and the child was born March 10,1893, 243 days from the date of coitus, and 247 days from the birth of the last preceding child. The infant bore every appearance of maturity, although, of course, it was premature by 27 days: it was 20 8 inches long, and weighed over 7.5 pounds.

From this case Kronig draws the following conclusions:

1. During a pregnancy of 243 days, reckoned from the fertile coitus, a mature child can be developed. [This amounts simply to saying that an eight months infant usually appears mature, a statement which no one can gainsay—Rep.]

2. Spermatozoa retain [that is may retain] their vitality in the lochial secretion.

3. Ovarian activity does not entirely cease during pregnancy; the follicles ripen so that they may reach maturity very soon post partum.

4. Menstruation and ovulation may occur independently of each other.

5. In strong and healty persons in the puerperium the endometrium may rapidly reach such a degree of regeneration that it is possible for the impregnated ovum to obtain a nidus very early in the convalescence. In the discussion Rosger remarked that he had seen in the dead subject, as early as two days post partum, glandular crypts in which an ovum could take root.

The customary representation of the puerperal endometrium as a wound-surface holds good only for the placental site. Rosger cited, as a curiosity, a case of coitus intra partum.

Variations in Intensity and Rhythm of the Cardiac Pulsations.—Although in general variations in the intensity of the heart sounds depend upon the strength of the systole, there are a number of other circumstances which may cause variations. Potain (L'Union Medicale) finds that among the most obvious of these are increase in thickness of the cardiac walls, or those of the chest, the interposition in front of that organ of gas or liquid or the presence of a portion of the lung, possibly in an anomalous anatomical position. Special sounds may be accentuated in certain diseases, as the aortic sound in Bright's and the pulmonic where there is an obstacle in the pulmonary circulation.

In most cardiac affections there is great acceleration of the rate, though sometimes retardation is observed. The latter, however, does not usually depend on a lesion of the orifices, and is often more apparent than

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real, some beats being too feeble to be felt in the pulse or even to be heard by attentive auscultation. This condition has great prognostic value as it indicates a change for the worse in the condition of the patient. The fetal rhythm, recently insisted upon by Huchard, depends upon an accelerated cardiac action accompanied by a modification in the duration of the pauses, so that the intervals between the two sounds seem of equal length.

Irregularity of action may depend on simple digestive disturbances, especially intestinal, but is usually a symptom of valvular lesion and it is well worth knowing that it is observed especially in patients who have been under treatment by digitalis.

At times three, or even four, sounds, may be heard with each cardiac revolution, at others, only one, in the latter case it is usually the first sound which is lost or rather becomes so faint that it cannot be heard. Reduplication may be normal and is then dependent on the respiratory movements, the reduplication of the second sound being produced at the end of inspiration and at the commencement of expiration, while the reverse is true for that of the first. The reduplication of the second sound is due to the premature closure of the aortic flaps from the increased tension of the blood in that vessel, and results from purely mechanical causes. The physiological reduplication of the first sound is much rarer. The pathological reduplication of the second sound may be the only sign of mitral stenosis, which otherwise gives no evidence, either general or local, of its presence. It is independent of respiration and accompanies all cardiac pulsations. Being due to changed conditions of pressure in the two arteries, at the beginning of the disease it is due to premature closure of the aortic valves, at the end to premature closure of the pulmonic; midway in the course of the affection there is no reduplication, but only an accentuation of the second sound. The reduplication of the second sound due to premature aortic closure is also seen in general pericardial adhesions, and the differential diagnosis can only be made by looking for other signs of this condition. The two conditions may, of course, be co-existent.—Boston *Med. and Surg. Jour.*

Canned Vegetables —The Chemical Division of the United States Department of Agriculture has just issued another part of its Report on Foods and Food Adulterants, technically known as Bulletin No. 13. The present issue, Part VIII, deals with canned vegetables, especially with regard to methods of preserving, the preservatives employed, the character of the vessels used and the food value and digestibility of the articles. A few words concerning this report may be of use, inasmuch as owing to the publicity given to it, medical practitioners may be questioned as to their view on the subject. Tin and lead were found, derived from the can and solder; copper from salts of the metal used for "greening" the vegetables; zinc in some samples of French goods, and sulphurous and particularly salicylic acid, employed for their antiseptic properties. Boric and benzoic acids, saccharin and hydronaphthol were not found in any of the samples examined. Tin is the most common metallic contamination, being present in every can that has been put for any length of time. Tin poisoning from the use of canned goods is not often alleged although Hehner and other experimenters have found stannous hydrate to exercise a marked poisonous action on guinea pigs and other small animals Lead is freely used by the packers both in the solder and in lower grade tin plate; but there is little danger of lead poisoning by the use of canned goods, for tin precipitates lead from its solutions and is not attacked by acids in the presence of as much tin as is found in the tin plate used. There is more danger of lead poisoning from the sheet lead top of glass jars than from the solder or lead of the tin cans. The quantity of copper needful for "greening" amounts to only a quarter of a grain per pound, but much more than this quantity was often found. The temperature required to destroy spores in vegetables tends to disintegrate many of them and render them less attractive in appearance; hence the need of salicylic acid. Doses of one-half to one and a half grams of this acid have been given and taken daily by experimenters for periods of many months without affecting the system in any notable way. Nevertheless its action on the kidneys is recognized, and in exceptional cases of renal disease its continued ingestion in the quantity present in canned goods may be harmful. In dyspeptic cases, also, the antiseptic may do harm by interfering with the normal action of the digestive ferments.

A trade journal criticises the report for conveying the impression that there is a widespread use of injurious antiseptics in injurious quantites, and points with emphasis to the fact that over one thousand millions of cans are packed and consumed every year in this country alone and no well authenticated case of sickness has been traced to them, which could not with equal force be attributed to the use of smilar articles not canned. The chemists, however,do not intend to convey that impression nor to urge a prohibition of the use of copper salts and preservatives but they claim the right on behalf of the people, of being informed by notice on the lable of the can whether any ingredient foreign to the vegetable is present. Packer should not be permitted to use these substances without notice plainly given of their presence and quantity, for the purchaser should be accorded the privilege of electing whether or not he will take the doses.—*Jour. Am. Med. Asso.*

The Pathogeny of Diabetes.—Drs. Chauveau and Kaufmann (*Med. & Sur. Rep.*) regard the pathogeny of diabetes as one of the most important subjects in progressive general physiology. The glycemic function plays a most important role in the nutritive activity. The blood studied in a fasting subject constantly contains glucose. The subhepatic veins contain most of

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the sugar of the economy, and the venous blood of the general circulation is always less rich in glucose than the arterial blood. This physiological sugar is, therefore, in an incessant state of formation and destruction. It is formed in the liver (Cl. Bernard) and destroyed or transformed in the capillary networks intermediary between the arteries with red blood and the veins with black blood (H. Chauveau). It is this condition of the blood which is expressed by the term glycemic function. This is, without doubt, an improper term because it implies a manifestation of activity, a movement, while it in reality is applied to a sort of static state. The true glycemic function consists in active nutritive changes which prepare, transform and utilize the sugary materials of the blood. This state of the blood is commonly designated by the term glycemia. The terms hyperglycemia and hypoglycemia are also readily used, applied to cases of exaggeration or of diminution of the normal or physiological glycemia. The glycemic function, therefore, represents the ensemble of acts which tend to maintain, with the permanence of the glucose in the blood, an equilibrium between the dispensing and the production of this substance. It is well known that glycosuria, the essential symptom of diabetes mellitus, is due to hyperglycemia, that is to say, an abnormal accumulation of sugar in the blood. But what is the immediate cause of this hyperglycemia? Does the blood become too rich in sugar because the tissues cease to appropriate this substance of the nourishing fluid for the needs of the nutritive acts which occur in the heart of the anatomical elements? Does this fluid enrich itself, or the contrary, in sugary material, because the liver turns more of it into the circulatory torrent, or even because other organs become auxiliary to the liver in the sugar forming function? In other words, it is the consuming of the sugar which is arrested or the production which is increased when this substance accumulates in the blood of the diabetic in sufficient quantity to provoke an elimination by the renal passages? The answer to this remains still in suspense. The method employed by the authors in their effort to solve this problem rests entirely upon the results of the comparative analyses of the arterial and venous bloods of the general circulation. Three cases may present themselves; either the venous blood becomes, as in the normal state, less rich in glucoee than the arterial blood, and then the hyperglycemia should be placed to the account, not of a default in the consumption of the glucose, but to an excess in its production, or the two bloods show themselves nearly equally rich in sugar, which necessarily implies a poor using of this substance in the capillary networks and places in this default of consumption the cause of the hyperglycemia; or finally, the venous blood becomes more sugary than the arterial blood, which indicates positively that the hyperglycemia is due to a production of glucose on the site in all of the tissues of the economy. To assure exactitude of the comparative results of the analyses of the two bloods the authors took care to observe: 1. That the two bloods should be gathered simultaneously and in the same amounts. 2. That they were treated exactly in the same way. 3. That the operations in general, particularly the dosage of the glucose by the standard fluid, should alway be done by the same manipulator.

In the physiological state the comparative analyses of the arterial and venous bloods practised under the conditions above mentioned never fail to demonstrate that the venous blood is less rich in sugar than the arterial. This same inferiority of the venous to the arterial blood in respects to the quantity of sugar is noticed in all of the deviations of the glycemic function which are provoked by a lesion of the central nervous system. This inferiority likewise shows itself in the hyperglycemia which follows extirpation of the pancreas. The authors will demonstrate this by presenting in a future report the results of the analyses in each particular case.

Ten Tests For Death.—It is the rarest thing in a physician's experience to be placed in any doubt as regards whether a person is dead or not. The cessation of breathing, the absence of audible heart-beat, and the physiognomy of the patient are enough. Every now and then, however, we are called upon to give some absolute test of death which is not connected with the heart-beats or the respiration. One of these criteria is the so called "diaphanous test," which consists of an absence of the translucence seen in living people when the hand is held before a strong light with the fingers extended and in contact. An English physician ralates in the *Lancet* an interesting exprience with this test

He was called to see an old lady who was believed to be dead, but whose countenance looked natural and life-like, the eyes being open. The family, being extremely anxious, urged that all the tests of death be applied, and this was done in the following order:

1. Heart-sounds and motion entirely absent, together with all pulse movement.

2. Respiratory sounds and movements absent.

3. Temperature of the body taken from the mouth the same as that of the surrounding air in the room, 62° F.

4. A bright needle plunged into the body of the biceps muscle (Cloquet's needle test) and left there, shows on withdrawal no sign of oxidation.

5. Intermittent shocks of electriciny at different tensions, passed into various muscles and groups of muscles, gave no indication whatever of irritability.

6. The fillet test applied to the veins of the arm(Richardson's test) causes no filling of the veins on the distal side of the fillet.

7. The opening of a vein to ascertain whether the blood has undergone coagulation shows that the blood was still fluid.

8. The subcutaneous injection of ammonia (Monte Verde's test) cause the dirty-brown stain indicative of dissolution.

9. On making careful movements of the joints of the

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extremities,of the lower jaw,and of the occipito frontalis, rigor mortis is found in several parts.

Thus of these nine tests, eight distinctly declared that death was absolute, the exception, the fluidity of the blood, being a phenomenen quite compatible with blood preternaturally fluid and at a low temperature, even though death had occurred.

10. There now remained the diaphanous test, which we carried out by the aid of a powerful reflector lamp yielding an excellent and penetrating light. To our surprise the scarlet line of light between the fingers was as distinct as it in our own hands subjected to the same experiment. The mass of eviedence was of course distinctively to the effect that death was complete; but, to make assurance doubly sure, we had the temperature of the room raised and the body carefully watched until signs of decomposition had set in. I made a visit myself on the succeeding day to assure myself of this fact.

This experience shows that the diaphanous test is not a trustworthy one.—*Med. Rec.*

Drainage in Abdominal Surgery.—Howard Kelly (*Arch. of Gynec.*) considers that the drainage tube is used too much. If operators would take more pains in small details, in checking all hemorrage, in limiting the spread of contamination, and in cleaning up the field, drainage would be seldom called for. Five years since, Kelly drained from 75 to 85 per cent. of all cases; now he drains in but 10 to 15 per cent. The glass tube is not free from danger. After the second or third day, it becomes infected with the white skin staphylococcus. Suppuration is doubtless rare, but it sometimes occurs. He insists that his assistants should take minute precautions when handling the drainage tube. A long, narrow gauze bag containing several strands of gauze, is safer and better than a glass tube. It is an error to believe that all the blood which tends to collect in the pelvis come away through the tube. At a necropsy where the tube had been used after operation, Kelly found clots scattered around it. The gauze bag is flexible, and it requires no cleaning out; it is therefore the best form of drainage for the abdominal cavity. It removes all fluids rapidly,and that remaining is quickly absorbed. In widespread peritoneal infection, two or more openings for drainage are needed. An abundance of gauze should be packed into the infected abdomen; yards may be needed. In this way, desperate septic cases will be saved. We must drain but seldom, but when we drain it must be done thoroughly.

Filters and Germs.—The filtering of drinking water is of very great importance if there is any suspicion that the water is bad; and in many places, owing to the scarcity of water caused by heat and drought, the water is in danger of being polluted. But many people live in a fool's paradise; and they think they are safe when they put their drinking water through a filter that has been used without cleaning or changing the materials for years. The only thing such filters can do is to pollute the water. Every filter should be abolished that cannot be easily and frequently cleansed. Perhaps the best is a table charcoal filter; but even this cannot be depended on for the removal of all germs. For perfect safety the water shonld be previously well boiled and then filtered. A filter from which great things were expected was the Pasteur-Chamberland Filter, but our contemporary, the *Med. and Surg. Reporter*, writes of this:

The fact has been asserted for a considerable time that the Pasteur-Chamberland filter was not proof against bacteria. This was disappointing as is was hoped by all and believed by many, that the Pasteur filter would remove all organic, as well as inorganic, meterial from the water which passed through it. Several tests have been devised for proving the passage of bacteria through the bougie of the filter.Smith and Moore (*Centrablatt f. Bakteriologie*) describe an extremely simple method. A bougie from an ordinary Pasteur filter is inverted in a large glass tube, the top of which is plugged abont the bougie with cotton. It is then sterilized by dry heat. A culture of the germ to be tested, which has grown for a few hours only, is transferred to the tube by means of a sterlized pipette. By means of air pressure a portion of the liquid is forced through the bougie into the tube. The filtered liquid is perfectly clear. The filtered culture liquid in the tube will remain clear until it is rendered turbid by the multiplication of bacteria which have grown through the walls of the bougie. The authors found that the hog cholera germ would grow through the tube in from five to ten days. The experiments made were sufficient to show that the pores in the tube are large enough to admit of the passage of bacteria the size of cholera spirillum or typhoid bacillus. They also show that there is a difference in the pores of different tubes. [These facts confirm in a measure the statements of M. Dujardin-Beaumetz that, "filters are of no use whatever, and thus another cherished illusion is likely to disappear"]. The fact should be borne in mind that thus far there has been no filter devised that is capable of turning out water "germ free" after it has been used for a considerable time. The only reliable method of obtaining wholesome drinking water is, if the water is cloudy from holding earth in suspension, to filter it to remove the dirt, boil it to destroy the bacteria and keep it until used in a sterilized vessel placed in a refrigerator. This is important at all times, but more especially during the coming season when cholera may dangerously contaminate the water supplies in many sections of our country.—*Pop. Med. Month.*

Freckles.—Freckles can be removed, according to Hager, by the application every other day, of an ointment composed of white precipitate and sub-nitrate of bismuth, each 1 dram; glycerine ointment half an ounce.

Now is the time to subscribe for the **Medical Review.**

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MEDICAL SOCIETIES

Association of American Physicians.—The eighth annual meeting was held at Washington, D. C., May 30, 31 and June 1, 1893 (Boston *Med. and Surg. Jour.*).

SPORADIC CRETINISM IN THE UNITED STATES,

by William Osler of Baltimore.

Dr. A. C. Wood thought, that, although cretinism was a rare disease, yet it was more common than ap peared from Dr. Osler's paper, because persons have not reported the cases which have occurred to them. He recalled two very positive cases which he had seen in his own experiance, entirely outside of any institution.

Dr. P. C. Griffith thought that what Dr. Woods had said was probably the case. He had seen a case the past winter which had been brought to the Children's Clinic of the University of Pennsylvania. He asked how old the "baby" was, and was told five years. The parents lived at Lancaster, Pa., which is not a mountainous region. There was no nervous disease in the family, and there seemed to be no way of accounting for the child's condition.

SOME PROBLEMS IN THE ETIOLOGY AND THE PATHOLOGY OF TEXAS CATTLE FEVER AND THEIR BEARING ON THE COMPARATIVE STUDY OF PROTOZOAN DISEASES,

by Theobald Smith, of Washington.

The course of Texas fever may be divided into a first stage (acute), and a second stage (mild or relapse) which may follow the first after an interval of two or more weeks. The first is characterized by a high fever and a rapid destruction of red blood corpuscles, amounting to half a million or more per cmm. in twenty-four hours. The second stage, or relapse, differs from the acute fever in its mild, non-fatal course, its fluctuating temperature and a much slower destruction of red corpuscles.

In the acute fever, the number of infected corpuscles which circulate in the blood is small, and rarely exceeds two per cent. The micro parasite contained in them is fully developed. In the mild fever, or relapse, the number of infected circulating corpuscles is, as a rule, much greater and it may reach fifty per cent. The micro-parasite, in the mild fever, is always in a very young stage in the corpuscle. The probable explanation of this curious phenomenon is a partial immunity of the affected animal acquired in the acute attack, in virtue of which a retardation in the development of the intraglobular parasite is brought about.

The reaction of the organism of the host in the presence of the invasion seems to proceed along lines different from those which are followed during the course of bacterial diseases. While there is a profound disturbance of the system, this seems to be due mainly to the large amount of debris in the blood, which cannot properly be disposed of by the excretory organs. Inflammatory or chemotactic processes are absent and the degenerative changes may be accounted for without assuming the presence of alkaloidal or proteid poisons originating in the micro-parasite.

An important fact which hitherto has not been brought out in the study of infectious diseases is the indefinite persistence of the micro-parasite, in very small numbers, in the blood of insusceptible cattle from the enzootic territory. Such blood is capable of producing the acute disease in susceptible animals. In other words, a complete symbiosis between an otherwise fatal parasite and the host seems to be compatible with and perhaps necessary to immunity.

This disease is probably transmitted exclusively in nature by an ecto-parasite—the cattle tick (*boophilus bovis*). This important fact opens an interesting and only partly explored field of inquiry in the transmission of human malarial affections.

Dr. Wm. H. Welch was quite familiar with the development of Dr. Smith's work, and was extremely interested in the results. The etiology of Texas cattle-fever has become, through Dr. Smith's researches, probably clearer than that of any other protozoan disease. We now know, not only the character of the micro-organism inside the body of the animal, but also the media of development outside of the body, in the cattle tick. Dr. Smith's paper is an important contribution to science, and is an illustration of the value of governmental aid in solving a problem of both scientific and economic importance.

THE BACILLUS PYOCYANEUS PERICARDITIDIS,

by Harold C. Ernst, Boston.

The material from which the bacillus was isolated was fluid drawn from a case of pericarditis. The fluid contained plenty of tubercle bacilli and this new bacillus. With this new bacillus a long series of tests were made upon a large number of different media and under differing conditions of temperature. The only two organisms with which it is likely to be confounded are the bacillus pyocyaneus of P. Ernst and the bacillus pyocyaneus of Gassard. Every step in the investigation of this bacillus was checked by and compared with cultures of the bacillus pyocyaneus derived from four different sources. Dr. Ernst gave in detail the essential differences, both macroscopic and microscopic, between this bacillus and those with which it has been possible to compare it. As the result of these tests, it appears justifiable to conclude that the bacillus is a distinct variety of organism, resembling in many respects the bacillus pyocyaneus but perfectly distinct from it.

Dr. A. C. Abbott, of Philadelphia, thought that in the bacillus described by Dr. Ernst, we have another addition to make to the group of green-producing micro-organisms. Some of its characteristics are very different from those common to the ordinary green-pus or-

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ganism: the essential difference between the organism described by Dr. Ernst and the ordinary *bacillus fluorescens liquefaciens*, being the production of the blue-green color upon which Dr. Ernst lays stress.

Dr. Smith had seen all variations in the color producing power of the saprophyte, and in some cases the color was a very dark green.

Gonorrheal Myocarditis.

by W. T. Councilman, Boston.

There have always been two opinions held about the secondary infections following gonorrhea; one that they are due to the accidental infection with other organisms which enter through the lesions in the urethra, produced by the disease. Gonococci have been found by various observers in these secondary lesions. Other observers have failed to find them. The most prominent secondary lesions consist of the various joint affections, of peri- and endo carditis, and of inflammation of the neighboring lymph glands giving rise to the bubo. Chronic inflammation of the Fallopian tubes in the female is now very generally regarded as due to a previous infection with gonorrhea. In a case recently seen at the City Hospital there was an acute urethritis, acute inflammation of the joints and an extensive peri- and myo-carditis. Gonococci were found in all of these places. The lesions in the urethra closely similate those described by Bumm in his experimental work on the disease. The gonococci were found only in the superficial layers of the epithelium. In the sub-epithelial tissue there was marked round-cell infiltration. It appears probable from a general consideration of the secondary infections that they are true infections resulting from the presence of the gonococci. In the cases in which organisms have not been found it is very possible that they were so few that the ordinary microscopic investigation would not reveal their presence. That the affection is not due to the presence of pus organisms is shown from the fact that cultures made from these secondary lesions are so generally sterile.

Dr. Reginald H. Fitz had no recollection of ever seeing a case like the one described by Dr. Councilman. Cases of infection through embolism from urethral disease, especially in consequence of surgical operations are not so very uncommon.

Dr. Alfred L. Loomis reported a case which had been very misleading, due to a mixed infection. The patient had gonorrhea for four or five weeks and then suddenly developed in endocarditis. Within twenty-four hours he had pains in his joints that had not existed before. A relative in the same house at the same time, came down with diphtheria; and in two or three days after the endocarditis, the man had a diphtheritic spot. Had it not been for the occurrence of diphtheria, the endocarditis would doubtless have been ascribed to gonorrheal origin.

Discussion on Tuberculosis.

Dr. Wm. H. Welch reported the results obtained in the experimental rabbits given to him by Dr. Trudeau a year ago. There were three rabbits, each inoculated in the same way with a pure culture of the tubercle bacilli, both in the eye and in the pleural cavity. One was a control animal; another was treated with bacterio-proteid; and the third by the filtrate from liquid cultures of the tubercle bacilli. The control rabbit developed a caseous inflammation of the inoculated eye. It went through the typical changes and developed caseous panophthalmitis; all the media became obscure, the cornea became vascularized, and subsequently there was atrophy of the bulb. The animal treated with bacterio-proteid became very emaciated, developed abscesses and ulcerations of the skin in different parts, and finally died without anything to show for the immediate cause of death except the extreme emaciation. There was extensive caseous disease of the eye, but not quite so extensive as in the control animal. The animal treated by the filtrate was of most interest, because the filtrate is said to possess distinct curative or preventive properties. This case turned out just as Dr. Trudeau might have wished. There was no extension of the tuberculous process. There developed a small, grayish-white, slightly opaque nodule at the upper quadrant of the eye in the anterior chamber, which became adherent to the iris, then grew smaller, and finally just a scar was left, without any caseation and without any secondary tuberculosis in the eye which could be determined during the life or after the death of the animal.

Dr. Whittaker said that from some reports made to a previous session of the Society the impression seems to have gone out that tuberculin wat not only useless but for the most part actually injurious. Since that time new light has been shed on the nature of the tuberculous process which shows how laboratory tuberculosis differs from human tuberculosis. Dr. Whittaker has administered tuberculin daily since it was first sent out, both in private and hospital practice, and has never seen any reason for a modification of Koch's first opinion as he expressed it in regard to cases of pure tuberculosis. He has observed that under this treatment there has been a singular and early relief from the depressing action of the disease, first of all, and more so than from any other method of treatment. Although a minority of the cases show an exaltation, a *spes phthisica*, yet in most cases there is a marked tendency to melancholy. After five or six injections of tuberculin, patients experience relief from this condition, and they continue to show this relief until some complication occurs. Patients who only have tuberculosis in its inception, having perhaps a light bronchial catarrh at the apices, or are still in the prephysical state of tuberculosis, where we only make the diagnosis by the discovery of the bacillus, when treated with tuberculin are completely rescued in the majority of cases. It does not take so long a time to effect a cure as is commonly asserted. Most of these cases are rescued in two or three months under careful use of

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the remedy, and these cases do not fall back into the condition of patients who return home from Colorado improved, who fall victims anew to the disease. Tuberculin is the only specific remedy for tuberculosis. All other remedies act only through the avenues of nutrition and resistance to invasion. Where we have mixed infections, as in the case in the latter stages of phthisis, tuberculin does little or no good and for the most part harm. It is the reckless administration of tuberculin in these cases of so-called hectic fever that has brought tuberculin into disrepute.

The following officers were elected for the ensuing year:

President—Reginald H. Fitz.
Vice-President—Wm. Osler.
Recorder—J. Minis Hays.
Secretary—Henry Hun.
Treasurer—W. W. Johnston.

Representative on the Executive Committee of Congress of American Physicians and Surgeons—William H. Welch.

Alternate Representative—M. Allen Starr.
Councillor—John H. Musser.

Drs. George Dock, of Ann Arbor, and T. M. Rotch, of Boston, were elected to membership in the Association.

The Effects of Large Doses of the Bromides in Epilepsy.—Ch. Fere (*Rev. de Med., Brit. Med. Journ.*) reports fully 20 cases of epilepsy in which from 16 to 21 grammes bromide of potassium or strontium were taken with the following results: Only 1 lost weight very considerably; in 9 other cases there was loss of weight, but of little importance generally; 4 remained stationary; and 6 others increased in weight during the treatment. Eleven of the 20 showed premanent, and 7 temporaty, improvement. In only 2 cases no benefit was noticeable. Doses of 15 to 20 grammes of the bromides are harmless when watched, and produce improvement in cases which have resisted smaller doses. Bromide of strontium may be given in place of potassium bromide with success. Attention during the course of bromide treatment consists in a frequent examination of the patients to ascertain the condition of the skin and take the weight in order to make up the balance sheet with regard to nutrition. When cutaneous lesions or a permanent diminution in weight exists it is necessary to look after the digestive organs with the greatest care, especially when the patient is in a condition of physical or moral depression and when the temperature is very low. In these conditions the accidents of bromism would necessarily be serious. The use of the drug must be immediately stopped, and elimination by the intestine hastened with the aid of purgatives, and by the skin with the aid of subcutaneous injections of pilocarpin.

NOTES AND ITEMS

The Southern Surgical and Gynecological Association will meet in New Orleans on the 14, 15 and 16 days of November and we have been informed that prospects are splendid for a successful meeting.

In Memoriam.—Dr. Nicholas Guhman died Friday, Sept. 22, at the age of sixty years. In the departure of Dr. Guhman from this world the St. Louis Medical Profession has lost one of its most estimable members. The open and honest character of the deceased as well as the interest he took in the meetings of the St. Louis Medical Society of which he has been Vice President and a regular attendant are well known to all, and he leaves many friends in the profession to mourn his death.

The South Carolina Disaster.—The sanitary condition of the whole Carolina coast, resulting from the hurricane recently has become most serious. Physicians in the vicinity of Beaufort and St. Helena are reporting to the Marine-Hospital Service a very large number of diarrheal and malarial cases. It is almost impossible, they say, to care for the sick, and to provide the necessary disinfectants. The President has detailed a medical officer to take charge of the sanitary measures at Beaufort, and has placed a revenue cutter at his disposal.

The Manufacture of Cripples.—A horrible disclosure has been made in Biskupitz, Austria, by the arrest of a gang of men who for some time have been engaged in crippling children for the begging trade. Several unfortunate children were found in the house with their legs and arms broken and bound in positions of deformity. One little girl had both eyes gouged out. Instruments, which had been used in producing physical deformities, were discovered in the cellar. After the children (who had been stolen) were sufficiently deformed, they were sold to other persons for begging purposes.

The Cure of Hay Fever.—The treatment of hay fever is subject to criticism such as comes to no other disease, namely, from societies of the sufferers themselves (Boston *Med. and Surg. Jour.*). It is interesting to note that the patients are not as enthusiastic over, and do not report such good results as a society of their medical advisers would be likely to do. The United States Hay Fever Association have recently held their annual meeting in Bechleham, N. H, and listened to papers largely on the disease from the patients point of view. It appears to be the general opinion that the only certain relief is to be found in the White Mountains, and that most therapeutic measures are of little or no use, and some of them harmful. The

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treatment by local cauterization in the nose is often of benefit, but the benefit is generally only partial and temporary.

Correction of Error.—Dr. R. A. Patterson has drawn our attention to an error in a prescription recommended by him in his paper on "The Treatment of Diphtheria," published in the REVIEW Sept. 9, 1893, The prescription should read as follows:

℞ Potass. chlorat., - - - - - ʒj.
Acid. muriatic dil., - - - - ʒij.
Tinct. forri muriat., - - - - ʒii.
Aquæ, - - - - - - ʒxij
(Instead of Aquæ ʒij as printed in the issue of September 9).

M.

The Pathogenic Microbe of Gonorrheal Orchitis.—L. Hugounenq and J. Eyraud (*Arch. Gen. de Med*) have made known the existence and principal properties of a phlogogenic albumen secreted by a microbe that one meets with in certain blenorrhagic pus. The special action of this substance on the testicle has led them to suppose that the micro organism which produces it ought to have a role in the pathogeny of orchitis, and so has led them to examine more closely this microbe, with the result that they discovered a diplococcus having almost the same forms as the gonococcus of Neisser, but of larger dimensions. Like the gonococcus, this new microbe is decolorized by Gram's method, but is clearly distinguished from the specific agent of blenorrhagia by its properties. It is met with in the blenorrhagic pus every time that the urethritis is complicated later with orchitis.—*Brit. Med. Jour.*

The Aristocracy of Health.—The tendency of mankind, says an exchange, is to separate, according to natural affinities, into clans and classes. We have had, from time immemorial, aristocracies of military glory, of political power, of landed estate, of wealth, of illustrious ancestry and of many other distinctive claims. Even the most rural localities are not altogether free from persons who have pretentious aspirations to aristocratic exclusiveness and privileges. To say that this is all wrong (says an American contemporary) would be, perhaps to make too sweeping an attack upon human nature, as no doubt most of us rather like this sort of a thing. "We want to point out" (continues the medical journal quoted) "not only a harmless, but vastly beneficent channel into which this tendency of our nature may be diverted. We wish to propose the establishment of an aristocracy of health. What a grand thing it is to be well-born—to come into this world with a sound physique and an unclouded intellect! What a splendid ambition it is to live so that the integrity of the body may remain unimpaired, and the power of the mind may increase until advanced age!"

The hygienic aspirations of our contemporary thus aroused, it is excited to yet higher flights, and its imagination stimulated to foresee in the distant future the newspaper account (extracted, let us hope from its own perennial columns) of a marriage in "one of our most select circles." The perfect symmetry and exquisite complexion of the bride and the manly strength and bearing of the groom sustain their claims to descent from families for many generations free from the slightest taint of scrofula, tuberculosis, insanity, nervous debility rheumatism, and all organic weaknesses or coustitutional tendencies to disease, whose members always died of old age; dynasties whose rosy-cheeked women never wore corsets or tight shoes never suffered imprudent exposure, nor indulged in unwholesome forms of social dissipation; whose men never weakened their nerves with tobacco, fired their tissues with alcohol, or clogged their systems by gourmandizing and indolence. These husbands and wives did not spend their physical capital faster than it accumulated, but reserved their vital forces to contribute to more perfect health and higher and nobler forms of mental activity.

"What a blessed promise such a union gives"(exclaims the prophetic commentator, with renewed unction);"who would not like to marry into such an aristocracy? Who would not be proud to be a descendant from it? What a power such a race would have among their fellows—far beyond that conferred by wealth!"

And yet such a desirable condition of things is not at all impossible or even difficult of attainment. Simply a little intelligent study and daily attention to plain laws of health would accomplish the object. Each husband and wife may begin now, and resolve that henceforth their daily lives will contribute to this glorious cause. Each young person may prepare to become a parner in establishing an illustrious family in this wonderfnl new aristocracy. And each victim of incurable diease may at least resolve to spare himself the pain of seeing a group of sickly children around his hearth stone.

"By joining in this movement"(continues the exhorter) "you do not stint and deny yourselves, like the miser, to leave an inheritance for heirs to fight over and squander after your death; you enjoy the full and rich benefits of it yourself and leave them a wealth that no man can take from them."

Then, say we, all hail and all hasten the glorious new order—the aristocracy of health, whose escutcheon shall be the erect athletic form, the blooming cheeks and ruby lips, the pearly teeth, and gleaming eyes of a happy race of healthy men and women.

The only fear is that our prophetic contemporary may have been just a little too prophetic, and may have overlooked some unavoidable conditions which stand in the path of his millenium. Still, his apocalypse is too enticing to be overlooked, and no portion of the community could be more competent to recognize, or would be more joyful to welcome the advent of this new and better aristocracy than the members of the medical profession.—*Pop. Med. Month.*

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Peroxide of Hydrogen is a standard article. Marchand's is pure.

Asthma.—The addition of five grains of Iodide of Potash to one drachm of NEUROSINE will effect surprising results in Asthma and often cure permanently if persevered with for a sufficiently long period. See ad.

Paraldehyd possesses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd which is an elegant preparation.

Amenorrhea and Chlorosis so common in school girls and teachers is due largely to nervous exhaustion, and where iron fails to relieve the nervines and uterine tonics contained in Diovibernia will often prove signally effective. Dose, a teaspoonful three times a day, and double the dose just before and during the menstrual period.

Few Physicians, who have practiced medicine five years; but, have assured some patient, relief in the use of cod liver oil; only to see the patient sink lower and lower, owing to want of power to digest the remedy. Cod-Liver Glycerine removes this difficulty, capable of being diluted with water, requires no digestion; but is a digestive stimulans. If you give Cod-Liver Glycerine it will be assimilated. It combines readily with all prescription,

In Speaking of the treatment of pneumonia by Quinine and Antikamnia, Prof Palmer says: The effects desired, and certainly as a rule, produced, are a decided reduction of the temperature, a marked diminution in the frequency of the pulse, a decided moisture of the skin, or free sweating, a slower and more easy respiration, or relief from pain and the feeling of fullness in the chest, a diminution of the cough and of the tenacious and bloody character of the expectoration; and, in short, not only is there a checking of the fever, but of all evidence—general and local—of the pulmonary engorgement and inflammation.

H. A. Beng, M.D., of Wheeling, Ill., in a letter to the Searle & Hereth Company, of Chicago, says: "I gave Tritica to two old gentlemen, ages sixty-five and seventy-four, with satisfactory results, both being cases of urethritis and cystitis. I administered the alkaline treatment for a day (or thirty-six hours) until urine became alkaline, following this with Tritica, which seemed to relieve all thirst and uneasiness for the next twenty-four hours. Inflammation subsided and on the third day the epithelium cells seemed to pass off with the urine, and on the fourth day patients were well—urine clear and slightly acid. Mucous membranes were again in their normal condition. Symptoms all subsided; patients pronounced cured."

Bryce's Pocket Practice.—This work on the Practice of Medicine is just from the press and represents the latest accepted views on pathology, treatment and practice of medicine, to which has been added the author's own personal experience over a period of twenty years of active practice. The aim of the entire work has been to produce one of the most practical, concise and handy volumes to be had, and it is the belief of the publisher that the object has been well accomplished in the present volume. By using a fine grade of hard-finished paper and medium size type the book has been finished in size and shape to be readily carried in any coat pocket. It is elegantly bound in flexible leather expressly for pocket use. See ad on colored page.

For Sample of Antipuralgos, a coal-tar product, address Katharmon Chemical Co., St. Louis, Mo.

A Good Buggy Lamp is one which gives a good light in any kind of weather. Such a one is that made by R. E. Dietz Company at a remarkably low price. See ad page.

Allaire, Woodward & Company, of Peoria, is a firm whose name is synonymous with purity and reliability of drugs. This house has been so successful in its business that it has enlarged its scope of usefulness. See ad page.

The Treatment of Scrofulous Glands.—Amongst the remedies employed for this purpose, the physician who has had any experience with the Elixir Six Iodides (W. G.'s), accepts the fact that it is the most effective combination he posseses.

The McIntosh Natural Uterine Supporter Company, formerly of Chicago. has now removed to 224½ S. 9th Street, Philadelphia, Pa. With increased manufacturing facilities and good business methods, their large patronage will naturally follow them to their new location.

The Andunea Chemical Company, St. Louis, Mo., have in their Andunea an antidote for morphia and the liquor habit. In addition to this it is very valuable in rheumatism, neuralgia, menstrual irregularities, etc. They solicit the names of such physicians as will give it a fair trial and they offer to send them samples and literature sufficient for a crucial test, free of charge.

Fellows' Syrup of Hypophosphites is peculiar to itself. Many try to imitate it, but without success. Fellows' Syrup contains the tonic properties, quinine and strychnine, which make it of unquestionable value. Mr. Fellows has examined several preparatione pretending to be just as good as "Fellows' Syrup," but finds that no two of them are identical. Fellows' Syrup is different from the others in composition, in freedom from acid reaction and in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnine in solution and in the medicinal effects.

Salo-Sedatus for Fever and Pain—As a fever and pain remedy Salo-Sedatus is unexcelled. There is no sedative that approaches it in value as a remedy to control the temperature. It is the fever and pain remedy. While it certainly lowers the temperature when above normal, relieves pain promptly, and secures to the patient refreshing sleep when needed, it never complicates conditions nor hinders convalescence. The quiet sleep resulting from Salo-Sedatus is induced sleep, not forced sleep, like that coming from morphine or chloral. The patient sleeps because of relief, and when the required sleep has been enjoyed the patient wakes up feeling refreshed.

Sennine in Gynecology.—The greatest difficulty heretofore experienced in the treatment of cervicitis, abrasions, fissure and ulcerations of the os uteri have been from the constant interference of the acrid discharges that effectually prevented any healing process. The various washes and solutions owing to these poisonous discharges have been only of temporary service. Sennine applied freely in its power form coagulates the oozing serum and thus hermetically seals the part until Nature restores its integrity. The application may be preceded by a thorough syringing with one part of Sennine to fifty of water. This solution is very efficient in Leucorrhea. If at the same time dessertspoonful doses of Dioviburnia be given internally three times daily the cure is rapid and permanent.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

Abdominal Hysterectomy and Hysteromyomectomy.

BY M. B. WARD, M.D., TOPEKA, KAS.

Read before the Section of Obstetrics and Gynecology, Kansas State Medical Society, May, 1893.

INDICATIONS.—Abdominal hysterectomy is the term commonly used to indicate either, the total extirpation of the uterus per abdomen, or the removal of the body while the cervical portion is left *in situ* to be treated in the various ways which I shall endeavor to describe later on. It may, therefore, be profitable to briefly observe that hysterectomy refers only to the total extirpation of the uterus, and never should be used as a term to indicate the operation known as hysteromyomectomy—amputation of the uterus at the cervix. The reason that these terms are used interchangably may find explanation in the custom in vogue which seeks the simplest term at hand to convey our ideas and expunges the complex term; simple nomenclature is always desirable, but we cannot entirely ignore authoritative definitions. In what I may say regarding the operations under consideration, I too, shall use hysterectomy in its dual sense for the sake of convenience, only trusting that the foregoing explanation will suffice to indicate which operation is being considered.

The indications for abdominal hysterectomy can be only briefly referred to in the time at my disposal. This procedure should be undertaken in all cases of cancer of the cervix, where the vaginal portion of the cervix is so far destroyed as to exclude the possibility of grasping the external cervical tissues to draw down the uterus toward the vulva which is one of the primary and essential steps in the operation for vaginal hysterectomy. This condition is frequently met with. It has been my misfortune to have two such cases, and I have had this painting made (the doctor had paintings representing some of the tumors he had removed by abdominal section), the better to illustrate this unpleasant, and to me unsurmountable complication of vaginal hysterectomy. I will pass this uterus around so that the members of the Society may examine it; and you may see, if you desire, some of the microscopical slides prepared from this cancerous cervix, by Dr. Gilbert, and now on exhibition in charge of the doctor in one of the adjoining rooms. This uterus was removed by abdominal section about one year ago, and the patient made an uneventful recovery and has enjoyed fair health thus far with no symptoms of return of the disease. It is true that one year is not sufficient time to ensure immunity from recurrence of the dread disease, but it is quite satisfactory, if not charming, to be able to give the patient one year of life and freedom from suffering, after some months of extreme suffering and confinement to bed.

Adhesions of the uterus from peritoneal inflammation, which completely fix the organ in the pelvis, seriously complicate vaginal hysterectomy. Should this fixation be also complicated with large peri-uterine tumors or abscesses, it will not be at all possible to remove the uterus in any other way than by the abdomen. This painting represents a cancerous uterus with ovarian abscess attached to its walls. This specimen we removed from a very large fleshy woman sixty years old. On account of the abdominal fat I was not aware of this complication in this case until I had endeavored to remove the uterus per vaginam; I had to abandon this proceedure because of this attached tumor, and had to extirpate the uterus by abdominal section. This patient died in about three days of edema of the lungs. I do not think the operation in this case would have greatly prolonged this woman's life, because the disease had invaded the surrounding tissues. In this connection I wish to observe that it is not always possible to draw the line between the operable and the inoperable cases of cancerous uteri.

So far as concerns the indications for hysterectomy on account of new growths in and attached to the uterus, we cannot do more than to make a few brief statements which may appear somewhat dogmatic to the student in abdominal surgery. To go into an elaborate discussion of this subject, giving the endless pros and cons is entirely out of the question.

Submucous fibroids may be nearly always removed per vaginam without the necessity of abdominal hysterectomy. Interstitial and sub-peritoneal fibroids, if removed at all, require abdominal section.

On account of the gravity of the operation it is but

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natural that women thus afflicted should desire to have the surgeon exhaust all simpler and milder methods before resorting to hysterectomy. Small uterine fibromata may prove not harmful to a degree demanding surgical interference, unless there is wasting and weakening hemorrhage or strong adhesions binding down the uterus in the pelvis so that it cannot ascend as does the gravid uterus, causing therefore, serious pressure symptoms, that is, obstruction of the lower bowel or even hydronephrosis from impingement of the urethra Should the foregoing conditions be present, hysterectomy is indicated and should be promptly performed. With a small fibroid which is unaccompanied by these serious symptoms but which is growing and does not yield to any of the mild methods of treatment, cure may be expected in a large majority of cases by simply removing the appendages, including a liberal amount of the broad ligament in order to cut off the uterine arteries. In uncomplicated cases this operation is safe and satisfactory. The necessity for hysterectomy is imminent when the patient's health is being undermined by the presence of the tumor, and no relief is experienced by careful dietary regimen and proper medication. This unfavorable condition is quite as frequently found in women who are afflicted with small fibroma as are those who have large fibrous tumors.

The most frequent cause of these grave symptoms is on account of the pressure on the pelvic viscera, as before mentioned, but it is not infrequently due to the degeneration of the tumor itself. Such, for instance, was the cause of broken health in the person of the little woman from whom this tumor was removed by hysterectomy. Profuse and persistent discharge from the uterus per vaginam had been present for some months, and pain was daily increasing in severity. The patient had known for several years that she was afflicted with a tumor, but paid but little attention to it, until a few months prior to applying to me for operation. This tumor is composed partly of bone—or what appears to be of bony structure. Degeneration had gone on to such an extent that quite a large nodule of growth easily separated from the main tumor to lift the tumor out of the cavity by the use of a cork screw. Large fibromata should be removed in all cases, regardless of the age of the patient, except of course, those who are too old to undergo the operation—provided the tumor shows noticeable signs of doing the patient injury by undermining the health. Do not postpone from day to day and week to week an operation for the removal of a tumor which you know cannot be removed by any other method, when every day of procrastination will add to the mortality of the operation.

Technique.—So familiar are you all with the various steps of the operation for hysterectomy, that I will make only a few brief observations. The technique of the operation for hysterectomy must largely depend upon the anatomical formation of the tumor to be removed. If the entire uterus including the cervix is involved in the growth to such an extent that the cervical portion is obliterated, and resembles the cervix of a gravid uterus at full term, it will be almost impossible to separate and treat the pedical extra peritoneally. This painting represents this character of the tumor, and while I did perform hysteromyomectomy, and employed the serre neude, I would not do so again under the same circumstances. When the tumor dips down into the pelvis on all sides, so that the lower border of the growth is below the point where we wish to apply the serre neude, we then must proceed to make a pedicle by dissecting or stripping down the tissue so as to go below the fibrous structure, in order that we may be able to successfully control the vessels. This tumor most strikingly represents this character of growth and it most certainly caused me to sweat great drops of —blood as it were—before I got the patient to bed.

Hysteromyomectomy has been followed by the lowest mortality when the pedicle has been dressed extraperitoneally. We have about four distinct methods of treating the pedicle, each of these methods has given satisfaction in many cases, namely: Treatment of the pedicle extra peritoneally with either the wire or elastic ligature; ligating the pedicle in sections and dropping it beneath the peritoneum and closing the peritoneum at once; dressing the stump by bringing it into the vagina and holding it by clamp forceps; ligating each vessel separately and bringing the ligatures into the vagina or what I think is still better bringing them up through the abdominal incision and thus preserve a small opening until they come away. In case this latter method is undertaken, we must carefully stitch the peritoneum to the cervical stump below the ligated vessels. We all stand ready to admit experience is often an invaluable teacher, and I have learned one thing from experience which I do not find mentioned in textbooks on hysterectomy, namely: That in applying the wire or elastic ligature to the pedicle it is of great importance that we secure all the vessels in the grasp before we cut the stump short, because there is danger that some of the vessels may retract and escape the pressure of our wire or ligature and the bleeding will go on where it cannot be observed. I do not think that the double operation is good surgery where hysterectomy is done for large and immovable fibromata on account of the difficulty in reaching the cervical portion through the vagina—the better method is to first amputate the uterus and then the tumor is out of the way, giving the operator no obstruction to hinder a rapid enucleation of the cervical portion. In hysteromyomectomy when you treat the pedicle extra-peritoneally, let me urge the use of fine silk sutures with which to unite the peritoneum and attach it to the stump; do not use the treacherous catgut, because some one else does, if you do not want to walk the floor for the first three days expecting every hour that symptoms of sepsis will appear, the result of imperfect closure of the peritoneum due to premature giving away of the sutures on account of the strain from vomiting. Another important observation is not to attempt to dress a short stump

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extra-peritoneally when you have a fat and deep wall to unite around it; in other words look out carefully that too much force is not applied in keeping the wire or ligature from burying into the tissues. Great care must be exercised in the use of the wire to avoid too rapid torsion.

A Case of Wasp Sting with Rapid Constitutional Symptoms.—A correspondent sends to the *Brit. Med. Journ.* the following account of a case of wasp-sting:

On July 18, at 5.30 P. M. I was called to see Mr. A., who, less than an hour previously, had been stung on the nape of the neck by a wasp. To soothe the pain, which was somewhat severe, he applied bicarbonate of soda. Some fifteen minutes later he felt his eyes watering but not painful. Getting worse he looked at himself in the glass and found his face somewhat swollen and his eyes bloodshot. He felt his body getting itchy, taking off his clothes found his chest and abdomen covered with a red rash. Half an hour after being stung his condition became aggravated, his eyes watered much, the face was so swollen that he could scarcely see, and he noticed cyanosis of the lips and around the eyes. His wife also remarked how sowllen and blue his face was, and this caused them to send for medical assistance. When I arrived the following was his condition: On the nape of the neck and to the right was a white well-elevated wheal, ovoid in shape and about almond size, where the wasp had stung him. The face was flushed and showed slight cyanosis, but almost all traces of the previous swelling had disappeared. The conjunctivæ markedly congested and the flow of tears increased, but the pupils were of moderate size and otherwise normal. The neck and the whole trunk, back and front, were coverd with a deep scarlatinal-like rash, showing a slight mottling, disappearing on pressure but at once returning. The left palm was likewise reddened but the limbs were otherwise quite free from any rash. All the parts affected with this rash—trunk and palm of left hand—had been very itchy, but this was now passing off. The left axilla was swollen but not tender to pressure, and the patient himself remarked that it was curious the left armpit should be swollen and the left palm red when he had been stung on the right side of the neck. The left hand had not been stung and showed no wound. The temperature was 98° F, pulse 60, regular and of medium tension. The patient, beyond feeling alarmed at his condition, was conscious of no other symptoms. Four hours later the rash began to fade, and next morning he was quite well.

Typhus Fever.—Typhus fever has broken out again in San Luis Potosi, Mexico, and a large number of deaths occur daily. The other cities are so far free from the disease.

EDITORIALS

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Rational Quarantine.

It is becoming more and more evident that the protection of a country against the inroads of an epidemic does not so much depend upon a quarantine which keeps out all passengers of an infected vessel for a certain period of time, whether they are healthy or not, than upon local sanitation based upon the proper understanding of the etiology of disease. The apparently insufficient quarantine laws of Great Britain have by some been attributed to a concession made to its commercial interests, but in the present light of scientific facts it appears, in the case of cholera at least, that the placing in quarantine of healthy persons coming from an infected part or that are passengers of a vessel upon which cholera has broken out, is a measure which, if carried out strictly in harmony with scientific facts, does not seem justified, when its advantages and disadvantages are balanced. Cholera germs have been observed to live in the bowel of man for eighteen days, they have also been found by Koch in the dejecta of apparently healthy individuals which had exposed themselves to the same influences as the cholera patients or had come in contact with the latter. In these examinations it was found that among a number of persons that had all been exposed to the same influences cholera attacks from the lightest to the severest form occurred and in some the symptoms were so slight that only a bacteriological examination revealed the fact that a cholera infection had taken place. These researches explain

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the negative results obtained by swallowing cultures of cholera germs as well as by other silly attempts at infection. If it is possible then that cholera germs may remain in the bowel for eighteen days or possibly longer, a shorter period of quarantine seems illogical and knowing, aside from this fact, that cholera cannot be kept out of a country with certainty by quarantine the very pertinent question arises whether quarantine of healthy persons is really necessary and whether communities depending too much upon quarantine would not be apt, in consequence of a feeling of safety, to neglect other sanitary measures that are of greater importance. The Government should look to the appointment of competent sanitary officers, and take care that above all the water supply is unobjectionable.

A memorandum of great interest defining the attitude of Great Britain towards quarantine has lately been prepared by Dr. Thorne, medical officer to the Local Government Board, in answer to a request of the Foreign Office to be supplied with a statement, "setting forth the general measure of the standing precautionary measures adopted in the United Kingdom to prevent the introduction of contagious or infectious diseases." In reply Dr. Thorne (*Lancet*, July 1 and 22) states:

"For nearly fifty years past it has been held that reliance on a quarantine system would be, to a large extent, impracticable, and that any attempt to carry it out would be injurious, both by reason of engendering a false sense of security and by affording a pretext to sanitary authorities for avoiding expenditure of those local funds on which, in this country, we depend alike for effecting large schemes of sanitary improvement and for carrying out our current sanitary administration. Hence, our principal trust has been in securing amendment in every way in the sanitary circumstances under which the population are living; and defense against cholera in this sense has been supplemented by the adoption of a series of cholera regulations which apply to our ports and coast line and which are aimed at preventing the introduction of cholera by means of shipping. * * *

If, as the result of examination, the medical officer of health certifies a ship to be infected with cholera, the ship must be moored at a specified place, and every person on board is required to submit to examination. Every person who, as the result of that examination, is not certified to be suffering either from cholera or from any illness which the medical officer of health suspects may prove to be cholera, is permitted to land immediately on satisfying the medical officer of health as to its name, place of destination, and address at such place. This information is communicated to the sanitary authority at the place of each such persons intended arrival, and it is for that other authority to take measures (which commonly include a visit for some five consecutive days, on the newly-arrived person) such as may be expected to prevent extension of cholera should that disease appear in any one after arrival in their district. Any person on the ship who is certified to be infected with cholera is required to be removed to a hospital provided by the sanitary authority. Should the condition of the patient not permit of this, the ship is detained under the control of the medical officer of health. And any other person certified to be suffering from an illness which it is suspected may prove to be cholera, can similarly be detained for the purposes of diagnosis for a period not exceeding two days. The ship is required to be disinfected and other precautionary measures have to be adopted as regards drinking-water, bilge water, infected articles, dead bodies, etc., after which she is at once released.

The only instance in which any further measure of restriction can be applied is as to persons on board a ship which, though not infected with cholera, either carries passengers who are in a filthy or otherwise unwholesome condition or has come from a place infected with cholera. If, in any such case, the medical officer of health deems it necessary to intervene, with a view to checking the introduction or spread of cholera, he is required ta give a certificate to that effect, When such certificate has been given no person is allowed to leave the ship unless he satisfy the medical officer of health as to his name, place of destination and address at such place, such information to be utilized in the same way as in the case of a ship certified to be infected with cholera. But beyond this there is no right of interferference either with the vessel or with those on board.

The English cholera regulations do not profess to be so framed as to prevent all chance of the importance of cholera into the country. They aim at detection and arrest of all actual or suspected cholera at our ports and at giving the earliest possible warning to inland authorities as regards particular persons about to arrive in their respective districts. If, in spite of these measures, the disease should be imported, every sanitary authority for the maintenance of conditions which should enable them to deal with imported cholera in such a way as to prevent its extension."

In a lecture delivered at St. Bartholomew's Hospital, Dr. Thorne says:

"Up to a recent date the Continental Powers had relied essentially upon a rigid quarantine system. Quarantine, as applied to the Thames, for example, would mean the detention of all vessels coming from infected ports for a period varying from ten to five days according to the conclusions of the Constantinople Conference or of the Rome Conference were accepted. During that period healthy and sick alike would be prohibited from having any communication with the shore. If, during the quarantine detention a case of cholera occurred on board, the whole of the crew and passengers, together with the ship, would have to go through a second period of detention and so long as any fresh attacks occurred. In the meantime shipping would be accumulating and the result for us would become a mere absurdity. And not only so, but half-a-crown would any night secure a boatman's service for landing on the river

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banks. In short, the system would only have to be applied to ensure its immediate breakdown.

England decided against quarantine for another reason. If the people in this country were told that a line had been drawn round England to keep out cholera, a death blow to our sanitary administration would at once be dealt. Since they have been told that cholera cannot, with certainty, be kept out of the country, and that they themselves must be prepared to deal with it if it is imported by maintaining their districs in such a sanitary condition that the disease shall not spread if it should make its way into them, eight millions sterling have been sent in sanitary works every year and hundreds of thousands of lives have been saved from typhoid fever and other epidemic diseases. The general mortality has also largely decreased and a Frenchman —an old fellow-student of his—who is now at the head of the public health service in France, has calculated that, according to the estimate of human life by Dr. Farr and other English authorities, taking all the millions we have spent and all the lives that have been saved (I forget the exact sum), we have just got our money back. It might almost seem as if we had done it on purpose. No greater calamity could happen to this country than to apply the system of quarantine. At Dover alone in one week in August, 5,800 people arrived at the port. What would Dover have done had she been obliged to quarantine them? They could not have them in the harbor at night, for they could easily have escaped; they could not have them on land for a similar reason. If they had put them to sea they would probably have been sunk by the first tempestuous wind. The attempt would be perfectly ridiculous and could be attended by nothing but disaster.

Quarantine was also a cruel process. That was best exemplified by reference to land quarantine, as, for example, during the Egyptian outbreak of 1883, when villages and communities were surrounded by troops with loaded rifles and bayonets. Any person taking food within the prohibited line would be subject to the same quarantine as the villagers, and it is believed that land quarantine has often destroyed more lives by starvation and misery than would have been sacrificed by cholera. But land quarantine, too, is essentially inefficacious, the line being broken without difficulty, whether in Egypt or elsewhere, by all who can afford to pay their tribute of baksheesh.

For England the abandonment of quarantine has been an almost unmixed good. The knowledge that no pretense would be made to keep out all chance of cholera in this country, has done more perhaps than anything else to induce our sanitary authorities to spend their money on great works of sanitation and on such improved sanitary administration as is likely to prevent the spread of any imported disease of the type of cholera. Millions have been spent to this end; but, on the other hand, hundreds of thousands of lives have been saved. Even if cholera should once more succeed in passing the barrier of our ports and diffusing itself inland and cause a heavy mortality, we should still be enormously the gainers in point of human life by the system which we have so deliberately adopted; but there is no doubt that our system is rather calculated to prevent than to lead to such a contingency."

The English method of dealing with epidemics appears to be an eminently practical one and in harmony with scientific facts and it is to be hoped that in the future, at least in the case of cholera, the United States Government will not lay so much stress upon quarantine of the masses as upon isolation of individuals and the carrying out of such sanitary measures as will remove the fuel for the spreading of an epidemic.

Anticholerine in the Treatment of Cholera.

Klebs has made a number of experiments with a substance which he terms "Anticholerine" (N. Y. *Therap. Review*). It is prepared by taking large quantities of sterilized cholera cultures and concentrating them over a water bath. The toxic substances are removed by means of absolute alcohol. The residue is a substance possessing bactericidal and immunizing powers.

A culture medium prepared by adding a few drops of a concentrated solution of anticholerine to agar, is incapable of developing the comma-bacillus, and if a few drops of anticholerine be added to a rapidly growing culture, the development ceases and the culture dies, while streptococci grow freely in the medium.

The non-toxicity of anticholerine was demonstrated by injecting guinea-pigs and especially those in a tubercular condition which are peculiarly susceptible to cholera. Klebs and Schneider have injected themselves with quantities corresponding to eight cubic centimeters of filtered culture without bad effects. Two guinea-pigs were inoculated within the peritoneum with o. 8 c. c. of pure culture of comma bacilli. One, which had received an injection of anticholerine, remained in perfect health. The other, which was not protected, had a rise of 9° F. in temperature and lost much weight, but it finally recovered.

Of two other guinea-pigs, the control animal died of cholera; while the other, which was treated with anticholerine two hours after the injection of the pure culture, remained in good health for six days when it died of a prolapse of the intestine through the operation wound.

Notwithstanding the small number of experiments he had made, Prof. Klebs did not hesitate to use his remedy in Hamburg. The patients were inmates of barrack F, where the severest cases were admitted, amonf whom the mean death rate was 80%. The result was that the mortality fell from 80% to 63%, and Dr. Manchot of the Eppendorf Hospital considered that the anticholerine prevented the febrile reaction. Among many similar cases was that of a young man who was stricken with cholera at an early hour and was admitted to the hospital 11 A M. On the first day five, and on the next day six, cubic centim. of anticholerine were injected. The

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temperature, which was only 35 C. (95° F.) on admission, rose the same day to 36.7, and the next day oscillated between 37.2° to 38C° (99° to 100.40 F.).

Nephritis Due to Tuberculine.

Dr. Chauffard (N. Y. *Therap. Review*) relates a most interesting case in which a patient suffering from incipient phthisis was submitted to an injection of tuberculine of $1^1/_2$ milligrammes. The patient's urine had been investigated before the injection and found to be normal. Immediately after the injection, the urine was found to contain albumen, which in twenty-four hours reached the enormous proportion of eight grammes per litre, twenty grammes being passed during the time. The injections were continued for a long time, and were always followed by the appearance of albuminuria, which would diminish in amount when the tuberculine was interrupted. The phthisical state did not improve, although at one time the patient increased slightly in weight. The disease continued its ravages, and after the injections were stopped, after the lapse of some months, the albuminuria continued. The patient finally died from the extension of the tubercular processes, but before death, while not presenting the appearance of severe nephritic disease, he had continued to pass albumen. The autopsy revealed multiple superficial ulcerations of the esophagus near the pharynx, amyloid degeneration of the liver and kidneys, no carciac hypertrophy, and marked diffuse nephritis, besides the pulmonary lesions.

Drs. J. Grancher and A. Martin, in a long series of experiments upon rabbits, made for the purpose of studying anti-tubercular inoculations, have noticed somewhat similar and fatal results in a certain number of cases, in which the animals have been inoculated with increasing doses of tuberculine. Further still, the lesions of parenchymatous nephritis have also been observed in rabbits under the same circumstances by Drs. Arloing, P. Rodet, and J. Courmont, who were investigating the effects of frequently administered medicinal doses of tuberculine.

Anesthetics at the London Hospitals.

The *Medical Press* has recently published a series of reports from the anesthetists of eleven chief London hospitals upon the method of administering anesthetics. They are most interesting and full of valuable details (Boston *Med. and Surg. Journ.*).

To most of American readers the statements regarding the use of ether will be not a little surprising. Nine of the the eleven hospitals give a decided preference to ether as the best and safest anesthetic, and while all make a more general use of chloroform or a mixture of chloroform and ether than is done here, they nevertheless use ether in a majority of the cases. The two exceptions to this use were at the Royal Free Hospital where ether "though strongly favored when possible," is not used to a great extent, and Kings College Hospital, where a mixture of alcohol, chloroform and ether, in the proportion of one, two, and three parts respectively, is used in nearly every case.

The reports showing differences in detail of administration are quite agreed as to the greater safety and usefulness of ether and the general class of cases when it is undesirable. Nearly all of the hospitals use nitrous oxide for minor operations, such as are done in an out-patient department. The majority use chloroform for children and persons of advanced age, or those suffering from bronchial disease; Dr. Hewitt, however, gives it in bronchitis and emphysema without trouble. Dr. Bourns, of Westminster Hospital, is inclined to use ether even for very old persons, as he thinks the general dread of ether inhalation in old persons is somewhat groundless, and when lung troubles follow an operation on an etherized old persons it is more likely the result of exposure of the chest and the cooling effec of carbolized towels packed about the patient than due to the ether vapor.

Many of the statements are strong and decided. Mr. Ward, of St. George's, says: "I do not use chloroform unless there is a good and sufficient reason to give the coroner in case of a catastrophe"; though he considers chloroform safe if given with great care. Mr. Braine, of Charing Cross, says: "Ether is by far and away the most popular anesthetic at this hospital, being administered to over seventy per cent of the cases; chloroform is only administered when the nature of the operation compels its use, as in operations upon the mouth, tongue, or where from existence of lung troubles ether is contraindicated." At the London Hospital Dr. Hewitt says: "Ether is the anesthetic now principally used. It is administered about twice as often as chloroform. Some few years ago a precisely opposite state of things existed, but an extensive and open-minded comparison of the two has resulted in a distinct preference for ether." The main consideration which has led to a more extensive employment of ether is this, it has been found that "hairbreadth escapes" and fatalities have conspicuously decreased in frequency since the change in practice has been effected.

Many of the hospitals begin the anesthesia with nitrous oxide before giving the ether, and claim to have a quieter, quicker result with less ether, than if they began directly with the latter.

The ether is given through an inhaler in nearly every case, and apparently much less is used than in many of our hospitals. The Clover's inhaler is chiefly used, though Ormsby's and Junker's have many advocates. Great stress is laid on having the anesthetic freshly supplied each day, the remaining portions in the bottle not being used again.

A not uncommon practice seems to be the use of both ether and chloroform in the same case at different times as, for instance, when under ether the patient shows a tendency to bronchial irritation or vomiting, the ether is removed for a while and chloroform used in its place. Again, at St. Mary's, "Drunkards and half starved,

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broken-down patients require very careful managment. We commence with ether, and when we reach the stage of excitement, which is pronounced, give a little chloro form and resume the ether when the patient is quiet and breathing well."

A noticeable fact in reading these reports is the undoubted advantage to be derived from a thorough and systematic supervision of the management of anesthesia such as is the case in the London hospitals where there is an official anesthetist to direct and give instruction to the students and house-officers in etherizing.

Rumination in Man and its Relation to the Act of Vomiting.—From a study of four cases of rumination in man and a survey of the literature upon the subject, Singer (*Archiv. f. klinische. Medicin.*) maintains that a distinction cannot be made between rumination and regurgitation, both, as observed in human beings, being the expression of a nervous constitution. The immediate cause of the act is a relative insufficiency of the cardia, which manifests itself intermittently and is related to the quality and quantity of the contents of the stomach. The mechanism consists in the aspiration of the gastric contents by the exhaustion of the air in the thorax at a time when the cardia is relaxed, this exhaustion being maintained by the inspiratory position of the chest, with simultaneous closure of the glottis. The proccess may be restrained by forced expiration. The cardiac antrum corresponds to a demonstrable dilatation of the esophagus in its cardiac portion and is a result of mechanical over-distention from the swallowing of large boluses of food. It furnished the anatomic basis for the defective closure of the cardia. Rumination is physiologically to be distinguished from vomiting; the only condition that can be compared with rumination is the esophageal form of nervous vomiting. The state of the gastric functions is variable and is but an accidental feature of the symptom complex of rumination; abnormalities of secretion are but the result of the neurosis upon which the rumination itself depends and only require symptomatic treatment. Rumination occurring in cases of esophageal diverticula and total dilatation of the esophagus is to be differentiated from genuine rumination by the conspicuous difficulty in swallowing and the retching that attends the regurgitation; in the case of a diverticulum the pepsin and the rennet-curdling ferments are absent. The treatment of rumination must be based upon the neuropathic disposition and upon individual conditions. It is important to abjure hasty eating and excessive drinking and to enjoin the voluntary suppression of the act. As an adjunct measure, tonic treatment calculated to increase the tonicity of the cardia, is to be instituted.—*Med. News.*

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ABSTRACTS

The Parasitic Origin of Cancer.—The increasing space that almost every medical journal gives to the etiology of cancer betokens a growing interest in this most important subject. For some time, particularly during the last year, attention has centered upon the investigations that have been made, pointing to a parasitic origin of cancer. Numerous and brilliant workers are in the field, and, although there is at present lack of harmony in their results, still much has been accomplished toward the solution of this most difficult problem. It might be well to remain silent until sufficient evidenee shall have been accumulated either to prove or disprove the theory. Yet, a brief review of the situation from time to time may prove of interest and, perhaps, profit.

To an unprejudiced observer, the parasitic theory seems to be rapidly gaining ground. The literature on the subject, which is very extensive, is well summarized by Ruffer and Walker, in their paper, entitled "Parasitic Protozoa in Cancerous Diseases" (*Journal of Pathology and Bacteriology*). The paper referred to, and the recent one on the same subject by Ruffer and Plimmer (*Journal of Pathology and Bacteriology*), form a most valuable and original contribution. The earlier paper is illustrated by three large plates, containing thirty seven beautifully executed colored drawings, representing parasites found in cancer of various organs. The parasites were found in almost every specimen examined (with three exceptions), and were always most numerous at the growing border of the tumor. Investigations were made on various carcinomata of the skin, tongue, thyroid gland, omentum, peritoneum, uterus, vulva, and on cases of cancer of the breast in women, taken without distinction from forty-five consecutive amputations of the breast. In the authors' opinion, these parasites can be demonstrated by appropriate means in all cancers.

They think it quite possible that various cancers of different organs may contain parasites differing in kind. Therefore, at present they are working only upon cancer of the breast, in order to better study the life-history of the parasite.

The work of these investigators has been criticized by Muller (*Virchow's Archiv.*), who asserts that the so-called parasites are only endogenous formations of cells. This view is also held by Councilman, Prudden, and other distinguished pathologists of this country.

It is worthy of note that Muller's criticism was based entirely on the preliminary paper, containing only imperfect illustrations, and hence should have but little weight. The later work contains a differential diagnosis between the parasites and endogenous cells. The staining reactions alone differ sufficiently to prevent their being confounded.

Others have contended that the supposed parasites

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were degenerated cells. To disprove this, Ruffer and Plimmer have examined a colloid cancer of the omentum and peritoneum, with a view of ascertaining whether there was any resemblance between the parasite and a colloid degenerated cell.

"Two remarkable facts were observed,—first, that not in a single preparation could we find the slightest resemblance between a colloid cell and a parasite; and, second, that the parasites themselves were never found in colloid cells, but always at the periphery, in healthy, active parts of the tumor, where a number of healthy cancer cells surrounded them."

Other investigators in the same field are confirming the truth of this theory,—notably Soudakawitch (*Annales de l'Institut Pasteur*), who has published a second paper, in which he maintains and extends his former conclusions. In the last Morton lecture upon cancer and cancerous diseases, entitled "The Parasitism of Protozoa in Carcinoma," by Dr. James Galloway, of London (*Brit. Med. Jour.*), the subject is dealt-with in a comprehensive, and, at the same time, scientific manner. The conclusions reached have all the more value from the fact that, until comparatively recently, the lecturer had been very skeptical as to the existence of a true parasite in carcinoma, and had been inclined to regard the supposed parasites as cell-inclusions or degenerations. He said: "When I was able to define this body, however, it became evident that something totally different from the appearances noted was under observation. Since that time I have examined a number of cancers from different regions, and I am glad to say I have been able to corroborate most of the descriptions of the various writers mentioned."

The lecture contains a clear picture of Coccidial disease in rabbits; and in view of the close analogy between this disease and carcinoma, it may be well to quote the author's conclusions."

"It may, in the meantime, be taken, as established in the case of the coccidium oviforme attacking the rabbit, that:

1. A more important developmental cycle of this parasite takes place only external to the body under aerobic conditions.

2. Influences outside the body delay and even prevent, the external sporulation of the parasite, thus interfering with its infective power.

3. The host cannot be infected by coccidia inoculated from animals already suffering; thus proving that the disease, though infectious, is so only in a very special way.

4. The parasite infects the host by passing into the alimentary canal, where it meets suitable conditions for its future development.

5. The parasite enters and grows within epithelial cells, without necessarily destroying them, and causes great proliferation of the neighboring epithelium."

The protozoa that have been found in carcinoma by the numerous observers already referred to are so strikingly similar to the coccidia referred to that they can scarcely be differentiated. Whether or not they are identical, seems to us a matter of indifference. That they are closely allied is more than probable.

That they have not yet been cultivated outside the body is no evidence against their being the cause of cancer, when we consider, how much time it has required to demonstrate their mere presence: As Calloway has pointed out, even though the characteristic coccidium was recognized as long ago as 1839, by Hake of England, it has been only within the past few months that the processes, forming the connecting links in the anatomical changes associated with its life history, have been made known by Dr. R. Pfeiffer.

Against the theory of the parasitic origin of cancer, may be cited the opinion of Councilman, expressed in a recent number of the Boston *Medical and Surgical Journal*. After a somewhat critical review of the work done in this field, he advances certain theoretical and practical reasons why such origin is impossible. He states: "From what we know of tumors and infectious diseases, it would seem almost impossible that carcinoma can have a parasitic origin."

Nothing is advanced in support of this statement; and when we reflect that such distinguished observers and clinicians as Sir James Paget, Sir John Simon, and a host of others, have long noticed a striking analogy between cancer and tuberculosis and syphilis,—diseases known to be infectious,—the argument loses most of its weight. Ballance and Shattock even go so far as to assert that "there is no fact in the etiology or life history of carcinoma or sarcoma that has not its counterpart in tuberculosis."

After a brief reference to the various older theories (e. g., Virchow's, Klebs's, etc), without any attempt to explain the shortcomings of each, Dr. Councilman proceeds to outline what he considers an insurmountable barrier to ever accepting a parasitic theory. This barrier is, in brief, as follows: In carcinoma, the form and development,—even the character of the degeneration,—of secondary tumors vary with the locality of the primary tumor, e. g., in an adeno-carcinoma of the rectum, we may have a typical reproduction of the tumor in the rectum. "In the liver, metastases following a carcinoma of the stomach, a different sort of tumor will be developed,—and in general the character of the primary tumor will be reproduced in the metastases. It would be impossible to conceive of a parasite producing such a condition as this," he says, and adds: "In the first place, the parasite would enter into the cells of the tissues in the secondary nodules, and cause them to proliferate, and a nodule, composed of indifferent tissue, might be developed; but a highly organized structure, entirely different from that of the tissues in which the nodules are seated, could not be developed."

If these conclusions, so forcibly expressed, can be accepted, there is no need to waste further labor upon the parasitic theory of cancer; but we are left somewhat in doubt when we learn that the indentical facts which to Dr. Councilman's mind, render the parasitic theory

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impossible, are the very ones adduced as lending support to the parasitic theory, by another and no less distinguished pathologist, Dr. Joseph Coats, of Glasgow.

In his lecture on the "Infectivity of Cancer" (*Brit. Med. Journ.*), he says: "Is there anything, either in observed cases of cancer or otherwise, which lends any degree of probability to the view that an actual tumor with definite tissue growth may be referable to parasitic agents?" In answering this question, he cites a case of malignant goitre, which he considers "lends support to the newer view of the parasitic origin of cancer." The case had already been published in the transactions of the Pathological Society of London. The details are, in brief, as follows: A woman had an ordinary goitre, which had existed sixteen years. A year and a half before death, a soft tumor appeared in the occipital bone. The tumor grew until, at the time of her death, it had destroyed the bone in a circular area nearly two inches in diameter. There were also several other smaller similar tumors occupying the bones of the skull, and causing destruction of bone. "It was a fact astonishing to me to find that this tumor of the skull presented the structure of the thyroid gland. There were the usual saccules lined with epithelium, and these presented, in many instances, the colloid contents so characteristic of ordinary goitre." And now comes the connection. "The significance of this case for the subject in hand connects itself with the etiology of goitre. It is well known that the disease is endemic in certain localities, in this respect resembling malarial disease. The most likely explanation of this endomic character is the existence in these localities of a morbid poison which has its residence in the soil, and finds its way into the bodies of men, just as malarial poison does. Some unknown miasma is the cause ascribed by many pathologists, among whom Cohnheim may be mentioned. If the view which I have stated as to the etiology of goitre be correct, then we have here an instance of tissue growth, a formation of fully developed tissue of complex kind brought about by a morbid poison, introduced from without. But the case to which I have made reference carries us still further. We have here an example strictly comparable to the secondary tumors in cancer. There is a transplantation from the original seat and there is growth of the graft in the new situation. The secondary tumor imitates in the minutest detail the structure of the primary growth presenting the glandular saccules and the colloid secretion, just like the primary one. If the primary growth is due to a miasmatic poison, then this agent is not only capable of inducing tissue formation in the normal site of that tissue, but also of continuing its action when transplanted along with germs of that tissue. I confess then that this case, although it forms one of a very rare series, had considerable influence on my mind in the direction of admitting that true tissue-growth, such as we have in cancer, may be produced by the action of an infectious agent, and that this tissue may assume the characters of malignant tumors."

If we accept miasmatic origin of goitre, as most of us do, this case alone is sufficient to dispose of Dr. Councilman's "insuperable barrier," and the parasitic theory remains as the one offering the greatest hope in the solution of the etiology of cancer. We have not yet referred to one, and perhaps the strongest, of our reasons for believing in this theory, and that is the endemic character of cancer.

The admirable work of Haviland, in England ("Geographical Distribution of Disease in Great Britain"), and of French observers on similar lines, have proved beyond question that cancer is endemic.

Furthermore, a large amount of evidence has been recently accumulated by Queilliot, Fabre, and Fiessinger to prove that cancer is contagious.

Haviland found that the low mortality areas coincided with the presence of limestones, and the high mortality districts were found in the low-lying areas consisting of more or less retentive soils overlying clayey rocks, and subject to seasonal floods, which bring down and deposit large quantities of vegetable matter, which finally decomposes.

Another important point was brough out by plotting the mortality areas of 1851 and 1860. It was found that there had been a gradual extension from the lower areas to the higher. These facts seem incapable of explanation on any other theory than that cancer is of microbic origin.—*Americ. Medico-Surg. Bull.*

Hemorrhage after Abortion.—Dr. Ubert L. Holford, of Beetown, Wis., writes: I received gratifying results from the use of Dioviburnia. In one case I used it to suppress the hemorrhage and allay the pain, following an abortion at two months, due directly to overwork in the very hot sun. The fetus in its entirety came away with comparatively no pain before I was sent for, but soon after pains and hemorrhages became alarming and I was sent for post haste. Arriving at the place at 1 A. M., with no assistance, save that of the excited husband, I decided to put Dioviburnia to a test, not, however, without first putting things in readiness for determined action should it fail. (Loaded hypodermic with ergotine, secured hot water, etc.), I gave one teaspoonful and in fifteen minutes could see its specific effects on uterus. At end of half an hour repeated the dose with increased effect, and at one hour from the time I entered the house, gave third teaspoonful and was more than pleased to see all the hemorrhage cease, and to learn that the violent cramp-like pains had left. In half an hour more I left giving instructions for teaspoonful doses to be given every three hours until I saw her again. She has since made a good rapid recovery. It was a new family for me, but they were over-gratified at results obtained and I think I can safely count on one more family added to my list. Dioviburnia is now one of the most relied-on articles in my obstetric bag.

Dr. Oliver Wendell Holmes passed his eighty-fourth birthday in good health on August 29.

MEDICAL SOCIETIES

Medical Education in the United States.—We are indebted to the *Journal of the American Medical Association* for an address on this subject delivered before the Section on Pedagogy of the Pan-American Medical Congress, by J. Collins Warren M.D., Professor of Surgery in Harvard University; President of the Section:

Gentlemen.—The work of this Section is of a character which does not usually form a prominent part in the proceedings of medical gatherings.

In almost any department of education, pedagogy or the science of teaching is a recognized specialty.

The rapid progress which has been made in medical education in this country within the last few years has brought about such profound changes in methods of instruction, and the strides which medical science is making all over the civilized globe are bringing into view so many new fields of work, that the teachers of to-day have a far more complex and difficult task than was presented to their predecessors. The art of teaching medicine has not been taught, in this country at least; the time has arrived to take up the subject.

In introducing such a subject as this, it seems appropriate to take a brief retrospective glance at the history of medical education in this country.

There lies before me as I write, a quaint little volume entitled, "A Discourse upon the Institutions of Medical Schools in America," published in 1765. It bears the following inscription:

"To Doctor John Warren, Physician in Boston, This Copy is presented by his respectful and affectionate Friend, John Morgan, Philadelphia, Feb. 27, 1783," This book may be safely regarded as the first contribution to the subject which we are to discuss to-day and the two dates are memorable; the former indicating the foundation of the medical department of the University of Pennsylvania, and the latter the birth of the medical department of Harvard University.

Dr. Morgan justly remarks that "medicine is a science as important in its object as it is difficult in the acquisition. It is very extensive in its researches and presupposes the knowledge of many other sciences. The cultivation of it requires no small abilities, and demands of those who engage in the arduous pursuit an enlarged and benevolent mind."

It is interesting to note that one whom we might justly look upon as the father of medical education in this country and who "had spent five years in Europe under the most celebrated master in every branch of medicine," should have taken so optimistic a view of the knowledge of medicine at that time as to say: "The industry of many centuries has already been employed to bring Physic to that degree of perfection at which it is now arrived." Fortunately he adds: "It will still require a long time to remove the obscurities which yet veil many parts of it."

Three years after this book was written, Pennsylvania held her first medical commencement and the provost justly remarked: "This may be considered the birthday of medical honors in America,"

The men who started this movement had received much encouragement from across the ocean and the remark of one of their teachers, Dr. John Fothergill of London, is of special interest to those concerned in the work of this congress. Writing to James Pemberton in 1762 he recommends Drs. Shippen and Morgan as men well qualified for the work of teachers, "both of whom," he says, "will not only be useful to the province in their employment but if suitably countenanced by the legislature will be able to erect a school of physic among you that may draw students from various parts of America and the West Indies."

During the colonial period of our history it was the custom for young men who entered upon the study of medicine to become regularly apprenticed to some practitioner for a term of three or four years during which time the preceptor was entitled to the students' services in preparing and dispensing medicine and serving as an assistant in minor surgical operations. As a return for this, the physician was obliged to give the student detailed and thorough instruction in all the branches of medicine. Many of the leading men frequently had several students in their office, constituting a small class, who were drilled as regularly in their studies as they would be in college. In some instances the term of apprenticeship was extended even to six or seven years. (N. S. Davis, Med. Ed. and Med. Institutions in the United States of America 1877.)

When the medical school sprang into existence it was at first intended merely to supplement the apprentice system, and as means of communication of one part of the country with another were exceedingly limited it was found desirable to concentrate school work into as small a part of the year as possible. Hence the origin of the short term of four months which has clung so persistently to the American system.

I will not undertake to weary you with a detailed account of the history of the development of our system of education. Suffice it to say that the close of the century found schools established not only in Pennsylvania and Massachusetts but in New York, Maryland and Vermont. There were, however, in 1810 only five medical schools in existence with an aggregate number of medical students of about 650, of whom 100 received the degree either of bachelor or doctor of medicine. The bachelor's degree was given to those who had attended one full course of college instruction. It was hoped that such students after a short period of practice would eventually return to take the higher degree, but as this expectation was not fulfilled the degree of bachelor of medicine was soon wisely abolished.

A noticeable feature of the education of that early period in our medical history were the requirements for

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a high standard of general education. Those students who did not possess a college degree were expected to pass an examination in Latin, mathematics and "Natural and Experimental Philosophy."

To obtain the degree of doctor of medicine it was necessary that the applicant should have been a bachelor of medicine for at least three years, should have attained the age of twenty-four years and should write and defend a thesis publicly in the college (William Pepper. Higher Medical Educatton. 1877.).

When we consider how imperfect was the knowledge of chemistry, physiology and even anatomy, and many other branches of medical science, and how little of what we now consider the foundation of medical education there was to teach—such a course cannot be regarded as a very complete and exacting one.

"Under these influences the first thirty years sufficed to cause the bachelor's degree to be abandoned by all the schools, the number of professors in each school to be double, and the length of the annual college term to be shortened one-third." (Davis.)

Such was the standard of education with which the present century opened. New schools continued to be created, not infrequently in connection with some university, as in 1810 at Yale University, in 1817 in Lexington, Ky., in 1820 at Brunswick, Me., in 1825 at Charlottesville, Virginia, until in 1840 twenty six new medical colleges had been added to the list, the whole number of students in the country amounting to 2,500, the population in that year being 17,069,453.

A glance at the report of a committee to the Medical Society of the State of New York in 1833, gives a good idea of the amount of work done by the schools at that period.

In the twenty schools mentioned in this report the number of courses of lectures required was two, with one exception—that of the University of Virginia, where three courses were required; and to the credit of this university be it said, the length of each course was ten months, whereas, the almost invariable custom of the other schools was to give a course of four months' duration only. The time of study purported, however, to be in all cases three years, "including the time devoted to lectures," as is stated in most of the reports. This straw indicates that at that time the chief dependence, or nearly so, was placed upon the extra mural instruction which was given to the student. At Yale University there was this additional requirement, namely, that the student was required to study four years, "if he had not graduated," which phrase, I presume, means if he had not already taken the academic degree. This seems to be the first intimation that a longer term than the standard then set was necessary for a complete equipment for the practice of medicine.

The Medical Institution of the State of Georgia (incorporated in 1828) gave at first the bachelor's degree with one year of study, but immediately abandoned it for the usual curriculum.

In the University of Pennsylvania, to which we look for the standard in these early, as well as later days, two full courses were required, but as in many other schools one course only was demanded from those who had attended a course at some other reputable school. In addition, a course of clinical instruction in one of the Philadelphia hospitals was required.

The course was then three years in length, but as each course of lectures lasted only four months, it was expected that during the remaining portion of the first two years the student should receive private instruction.

As the period of the school term was so short, it is interesting to note at what time of the year the various courses of lectures began.

This, it will be seen, varied greatly according to the geographical position of the institution. At Dartmouth and the University of Vermont the term began in August. In Bowdoin College, Maine, however, it began in the middle of July, continuing until the middle of May that is, the term time in the far north was in the summer or spring.

At Yale and Harvard and in Philadelphia and New York the term opened at the end of October or the beginning of November, as did also the schools in North Carolina and Kentucky. The University of Virginie, with its long course of ten months, began September 10.

Although the term time was exceedingly short in some schools a large amount of work was crowded into the daily routine of the students. Five or six systematic lectures a day, with attendance on clinics and dissections when possible, was considered nothing more than a fair amount of work for the medical student to digest properly.

This system of teaching remained practically unaltered in 1851, if we may judge from a report to the Committee on Medical Education of the American Medical Association (W. Hooker, M.D., 1851.). In regard to the private instruction which was supposed to continue during the remaining eight months of the year, the report states that a very large proportion of students simply read medicine under the direction of their preceptors. Anything like careful instruction upon the part of the teachers did not exist. The student neither while attending lectures nor while in his preceptor's office was encouraged in anything like faithful and rigid study. To remedy the defect, private schools for teaching medicine were founded by enterprising physicians and surgeons and these quiz classes which were then inaugurated, became a prominent feature of the national system of teaching. Many a distinguished professor has first won his spurs at these private schools, and many valuable experiments in medical education were carried on by these men. As the college term has lengthened, the necessity for these accessory courses has diminished, and in many cities the extra mural instruction, whether by private school or by teacher, has passed into history. No one will, I presume, regret the departure of the year of private teaching, "by some respectable practitioner," whose certifi-

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cate, purchased by a handsome fee, came eventually to have so little meaning. When this custom was first inaugurated it was the sole method of inspection, and during the long period of apprenticeship the student received a large amount of instruction of the most valuable sort. When the medical school came into existence the attempt was made to combine the two systems. The practitioner, relieved from the responsibilities of giving a complete course of study to the student, gradually relaxed his efforts as a teacher until this part of his daily work came to have only a nominal value.

According to Davis it consisted in 1877 in little more than the registry of the student's name in the doctor's office, permission to read the books of his library or not as he chose, and the giving of a certificate of time of study for the student to take to the medical college where he expected to graduate.

At the beginning of this century the successful practitioner gave a prominent place in his household to the medical student. I have often heard my father and many other practitioners of his day tell stories of the school life of those times. The office in the old homestead where I began the practice of medicine, then a luxurious library, was in those times a plain room with a sanded floor, occupied during the day by a small band of medical students who all boarded in the same house. The old room was the scene of many amusing stories of schoolboy life, and also of thrilling tales of escape of indignant pursuer, by the hero of some graveyard scrape which was rendered necessary by the peculiar laws of that period. This phase of student life has long since passed away and the equally agreeable and far more profitable experience of hospital life has taken its place. Would that I could add that such hospital experience was now the privilege of every medical student in the land.

As we approach the middle of the century, we find the nation growing rapidly in population and prosperity, and a corresponding increase in the numbers and activity of the medical profession. From 1830 to 1845 the number of medical schools in the United States had more than doubled.

At a meeting of the Medical Society of the State of New York in 1839, when the subject of medical education was brought forward, it was proposed to hold a national medical convention the following year in Philadelphia, consisting of representatives from the different schools and State societies. No response was made to the action of this society, but in 1844 Dr. N. S. Davis, then a delegate from Broome county, New York, offered a resolution that a national convention be called in 1846, and the American Medical Association thus sprang into existence, the fundamental idea, which brought about the formation of the association, being the improvement of our system of medical education.

It was high time that some such movement should take place, as the rapid increase of the number of medical schools brought with it a constant increase in the laxity of methods of teaching.

The equipment of a new school was sometimes pathetic in its meagerness—a mannikin and a few lecture rooms constituting the entire "plant" of the infant institution. It would not do to question the dean too curiously about the clinical facilities which the school enjoyed; and as for laboratory work there were few teachers sufficiently advanced in their ideas to think of criticising the absence of such instruction. There was, indeed, no time for it. Every available space in the tabular view was filled with lecture hours. Professors were asked to come from neighboring towns to assist in teaching, and often gave two lectures in the same day, This cramming process, which seems so peculiarly American in its hustling activity, is perpetuated to the present day in a limited number of schools, chiefly those situated far from medical centers. As Oliver Wendell Holmes has said, life at that time was cheap; medical visits in the country were worth only twenty five cents a piece, and the ambitious student could not afford to make an expensive outlay for his future work.

The American Medical Association therefore justly put on record its opinion, "that the abuses which exist in the modes of medical education pursued in this country demand the serious consideration of the profession," and at each meeting it continued to sound a note of warning on this all-important subject.

One of the principal reforms which it proposed to bring about was the lengthening of the term of each year from four to six months, and you will doubtless be somewhat surprised to hear that at the second meeting of the Association, which was held in Boston, a paper was presented from the faculty of Harvard University opposing this proposition.

Tempora mutantur et nos mutamur in illis.

If Harward was unwilling to lead in the matter of reform at that time, it is not surprising that the other schools should not have been persuaded to change their customs. To the Chicago Medical College—which was founded in 1859—must be given the credit of having been the first to attempt to lengthen the college course and to establish the system of teaching upon the so-called graded plan (N. S. Davis. Contributions to the History of Med. Ed., etc., 1877.). The school was in fact organized for this express purpose.

Little change was, however, effected by the Association in the methods of teaching at that time, although the discussions which were constantly held were destined eventually to bring forth good fruit. During the following decade little was done in the way of reform.

Graduating from the academic department of Harvard in 1863, I had an opportunity to study personally the methods in vogue at that time and am the more competent to express an opinion as I passed one year of my course of study in Philadelphia. The old system of medical education was then in all its glory and presented a striking contrast to one who had been sub-

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jected for four years to the strict discipline of a well conducted university.

The course of lectures in Philadelphia began about the first of November, and the day was occupied in a bewildering succession of lectures, on all of which the student felt called upon to attend, as he had been obliged to "take out tickets" for the full course. The teachers were able, conscientious, and in many cases brilliant men, and many a lesson then learned has been of value in after life. Clinical teaching was, however, largely crowded aside by the superabundance of systematic lectures. The course came to an end on the first of March, and the class—which was an enormous one—was allowed to scatter to the four quarters of the country. Many of my classmates returned the following autumn, and after attendance on a second course of lectures and having also handed in the certificate of study from the "respectable practitioner" were able to graduate in the following March; that is, after having been connected with the school less than eighteen months. This may appear to the younger members of this Section an absurdly short curriculum, but there were a considerable number of enterprising young men who did not propose to occupy so long a time in obtaining their education.

You will remember what has already been said about the period of the year occupied by the school term. At that time there were not only schools who had their college "year" in the winter, but there were spring "years" and summer "years" as well.

Several of my friends proposed accordingly, after leaving Philadelphia in March to take a spring "year" at another school, in accordance with a custom which many at that time followed. Such a student was therefore able on July 1, to show to the examining body tickets for two full courses of lectures and a letter testifying to private instruction. It was notorious that many students at that time were able to obtain a degree after nine months only of medical study. The custom of short courses of study at different periods of the year unfortunately still prevails. This zodiacal paradox has not yet been fully eliminated from the medical calendar. The condition of teaching at Harvard was practically the same as at Philadelphia.

It is not surprising that the best class of students were dissatisfied with the opportunities, and that the number of those who found it necessary to go to Europe to complete their education was constantly increasing. Two and even three years of study was not considered too long a time to occupy in this manner. It is true that spring terms of a supplementary nature were organized by most schools, and those students who chose to remain could receive instruction throughout the year. The majority of students, however, disappeared, many of them employing their time in other occupations to earn sufficient money to pay for a second course of lectures. The class of individuals who studied medicine at that time seemed far inferior to the medical student of to day in culture and refinement. President Eliot says of the medical students of that period: "In this university, until the reformation of the school in 1870 71, the medical students were noticeably inferior in bearing, manners and discipline to the students of the other departments; they are now (1888) indistinguishable from other students."

The date which I have just mentioned marks the era of a great change in the history of medical education. The rising generation of teachers were not content with the antiquated methods of a previous century; they had learned of a new order of things in the centers of medical learning in Europe. As the old generation of teachers went out and a new one came in, the modern ways of teaching grew into a substantial system which had come to stay. Harvard adopted the graded course of three years' study, but she did also far more than that—and in this respect she stands in advance of almost every other school in the country—she lengthened her course to nine months, so that her two terms correspond with those of the other departments of the university and represent a full year's work.

I will not undertake to record the history of the reform in medical education since that time; it is familiar to most of you. The example which has been set to the rest of the country by the University of Pennsylvania and by the College of Physicians and Surgeons of New York is too well known for me to repeat them here.

While criticising, as I have done, the work of a previous generation, I ought to remind you that our forefathers accomplised what they did only by individual efforts. There were no governments, and as a rule no liberal benefactors to back them in their undertakings. Their schools had to be conducted on business principles, with a keen eye to the practical success of their venture. During the past twenty years, it is true, a number of State universities have been established. In the University of Michigan, and possibly in one or two other State universities, the medical professorships like those of other departments, are sustained by the income from the general endowment, independent of fees derived from medical students; but, as a rule, the success of the school has depended upon the patronage which it has received. It may be justly said, therefore, that the whole system of medical education in this country is the spontaneous outgrowth of the work of the medical profession, and that it is due to their public spirit and disinterestedness that so important a department in the educational development of a great nation has been brought to its present state of excellence.

The good work has, however, but just begun. The reform of medical education is still in its infancy. If we are to believe all the glowing announcements which we read in the annual catalogues of the various schools, we might be lulled into a sense of calm security for the future; but, unfortunately, the actual practice of many, I might say a majority, of the schools does not come up to the ideals which are here set forth.

The essential points in the new scheme of educa-

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tion have been well stated by our President, Dr. Pepper (Introductory Address, Philadelphia, 1877.):

1. The establishment of a preparatory examination.

2. The lengthening of the period of study to at least three full years.

3. The careful grading of courses.

4. The introduction of ample clinical and laboratory instruction.

5. The establishment of fixed salaries for the teachers.

In a general way we may obtain some notion of the improvement which has been made by a study of the report of the Illinois State Board of Health for 1891. According to this report there are now 148 medical schools of all kinds in the United States and Canada. The number of those requiring certain educational qual ifications for matriculation is 129.

The number of schools requiring attendance on three or more courses of lectures was, in 1882, twenty-two. In 1891 the number was eighty five.

There has been also a gradual increase in the dura tion of the lecture terms from an average of 23.5 weeks in 1882–83 to 26.3 weeks in 1890–91. In 1882–83 there were eight colleges that had but sixteen weeks; the number of colleges having terms of six months or more is now 111. The number of colleges which have gradu ated students at the end of the second course of lectures the present year is less than 40 per cent of the whole number of schools in the country.

There are now in the United States thirty-two examining and licensing bodies that do not give instruction. Although the work of these licensing boards is far from uniform, a great deal has been accomplished by them. There are at the present time fifteen States with Practice acts that require an examination of all persons desiring to practice medicine in the respective commonwealths. These States include nearly 50 per cent of the entire population. In many States the whole complexion of the medical practice has been changed by the clarifying influences of these bodies. The reports on medical education by the Illinois board, I do not hesitate to say, have exerted a more powerful influence on the movement in education than any other publication which our medical literature has produced.

The effect of these Medical Practice acts which establish a minimum of time spent at medical lectures and provide an examination for those who wish to become practitioners, are shown in the statistics which have just been given. At the present time State examina tions are required in Minnesota, North Dakota, Mon tana, Washington, North Carolina, Alabama, Florida, Virginia, New Jersey, New York, Nebraska, Maryland and Utah. (Millard. "The Necessity and Best Meth ods of Regulating the Practice of Medicine," *Jour. Am. Med. Ass'n*, July 30, 1892).

Millard, who has had experience in framing the act of Minnesota, believes that it would be an improvement upon the Medical Practice acts at present in existence, to separate the two functions of the board, the licensing power and the educational supervision. He thinks that the best interests of the public will be observed by assigning the duties of the State licensing power to the various State Boards of Health. The regulation of all forms of education should, on the other hand, be vested in a central power consisting of a single board, to be known as a State Bureau of Education, with power to regulate all educational institutions granting degrees, together with the power of granting charters and revoking the same; particularly should this apply to all institutions wishing to afford the community any of the various forms of higher or special education.

Having thus sketched the progress of medical education up to the present time, let us now glance at some features of the present system in which it is desirable that further improvement should be made.

The importance of a preliminary training for the study of medicine is a problem which has occupied the attention of our most prominent teachers. That the medical student should have received a fair amount of education goes without saying. The importance of a proper preliminary education is thus forcibly stated by that most experienced of German teachers, Professor Billroth. He says in reply to the objection to a preliminary study of the natural sciences as a basis of a medical education:

"The educated of all nations should not fail to encourage to their utmost, knowledge and study—in all countries and stations of life they should not fail to maintain the standard which they have set up, both for themselves and others; they should not fail to support the government in all efforts directed towards this end.

"The physician, the lawyer, the school teacher and the clergyman form the nucleus of culture in the community; they are, especially in the country or small towns, the representatives of the educated element of society. The people seek their advice in time of need, and they are their sole source of knowledge in many things.

"To neglect the education of such persons, to lower their mental and scientific standard, to bring them up so that they know no better education than the tradesman, the tailor and the cobbler, would be, in my opinion, the suppression of the educational development of a nation and is a policy both corruptible and immoral in principle, as it would inevitably ruin a nation and bring it prematurely to that point of decadence where it would become the prey of others."

The importance of these views is fully appreciated in Germany, where the professional schools are integral parts of the university, and the entrance to the professional schools depends upon the previous completion of the course in philosophy, a course which corresponds to that of our academic degree.

In Dr. Holmes' suggestive article (The Forthcoming Report of the Bureau of Education on Professional Education in the United States," *Jour. Am. Med. Ass'n*, January 14, 1893) on this subject it is shown that while the increase in the total number of medical students has been very great during the last decade, the increase in

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the number of "college men" who have entered the profession has been very slight, and in some of the more prominent schools the percentage has even slightly diminished. The author says: "It can not then be doubted that relatively a smaller number of medical students have a bachelor's degree than in 1880, though the education of the average medical student is superior to the average medical student ten years ago." Although the proportion of medical students to students of law and divinity is greater in the United States, the relative proportion has diminished in the last ten years, whereas in Germany in the same period, a period during which medicine has become more of a science and the domain of surgery has increased under antiseptic methods, the proportion of medical students to the students of other professions has greatly increased. The reason for this variation in the proportion of students in the two countries is explained by the imperfection of our system of education. Educators have not had proper control and medicine has not been placed upon that dignified scientific basis which it enjoys in Germany. Dr. Holmes complains that the medical department is neglected by every university in the United States. "It is farmed out or left to shift for itself."

Harvard has recently made an attempt to overcome the difficulty by a modification of the academic course. As Welch points out in an article on this subject (some of the advantages of the union of Medical School and University, 1888): If a young man choose the medical profession he should devote at least four years to medical studies, including the preliminary sciences. If he supplements this with a year in a hospital and a year or two in study abroad, and all this work has been preceded by a college academic course, he would not be able to enter upon the practice of his profession much before the age of thirty.

Dr. H. P. Bowditch (remarks made at a meeting of the Academic Council, 1887), Dean of the Medical Faculty of Harvard, has strongly advocated a change which would overcome this difficulty. The average age of students who enter the Harvard academic department, as President Eliot has shown, has been gradually rising during the whole of this century until it has reached nearly nineteen years. The student who enters the medical school therefore finds himself just beginning the preparation of the real work of his life at an age when many of his contemporaries are already engaged in the productive work of their professions. In Germany the best class of students begin their professional studies at a little earlier age than that at which our young men enter Harvard College. As the course of study leading to the degree of doctor of medicine lasts five years, it follows that the German physicia.. is ready to begin practice before he is twenty three and a half years old.

The average age of matriculants at Oxford is nineteen years, and it is perfectly possible for an Oxford student desiring to study medicine to begin his purely professional studies before the end of his second year of college life. The dean writes me upon this subject as follows:

"There are many students in our school who have had one or two years of college life either as special or regular students, and these have entered the medical school because they have felt the necessity of getting started in their life work. These men would have been glad to take the A.B. degree if it could have been procured in a shorter time, but they consider it too dearly purchased when it involves so much delay in beginning their professional life."

It seemed, therefore, reasonab.e to the medical faculty of Harvard to make the following proposition, namely, that the academic council should consider the expediency of granting the degree of A.B. to all undergraduates who should subsequently take the longest course of study offered at the professional school after three years' attendance in the academic department—the professional degree and that of A.B. to be given simultaneously at the end of the professional course. One of the medical studies at least can be obtained in the usual college curriculum, and general chemistry is frequently "anticipated" by students who enter the medical school. It is hoped, indeed, that this course will soon become one of the "preliminary studies" to medicine. It would be a short step to place one or two more of the scientific medical studies on the list of academic electives, and a whole year could be thus anticipated. The relations of professional schools to the university are not appreciated in the same light that they are in Germany, and the proposition of the medical faculty after much discussion was finally declined. The advantages of a more intimate relation between the medical school and the university are clearly set forth by Welch in the article referred to. The duplication of laboratories is thus avoided, and men of different branches of sciences are brought more intimately together. The important departments of botany, zoology, and comparative anatomy cannot fail to have an elevating influence upon the work done in a medical school. How much more rapidly might not original investigation progress when different branches of science work in a common cause. It is here that the great strength of German science and progress takes its origin.

A movement in the same direction is the establishment in our colleges and scientific schools of courses of tuition, intended specially for the benefit of those who intend ultimately to study medicine. Such a course has been planned by Prof. Shaler in the Scientific School of Harvard, and a similar course is offered by the Institute of Technology.

Professor Shaler's course preparatory to medicine consists of two years. In the first year we find physics, zoology, botany, general chemistry rhetoric and elementary French or German, and freehand drawing among the studies required.

In the second year there is botany, zoology, comparative anatomy, geology, comparative osteology, physics, qualitative analysis and themes.

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It is certainly to be hoped that the medical teachers of the United States will not remain content with the very elementary examinations which are now demanded for those students who have not received a college education.

The advantage of a previous college training is shown in some statistics given by Billings (Ideals of Medical Education, 1891) of examinations conducted by the examining boards of the army and navy. Of these candidates who had a college degree 34 per cent were successfull, and of those who had no such degree 28 9 per cent succeeded. It is interesting in this connection to note that taking the medical schools of Harvard, Yale, the College of Physicians and Bellevue Hospital of New York, the University of Pennsylvania, and the University of Virginia together, 46.1 per cent succeeded, while for all the rest of the schools in a body 22.3 per cent succeeded.

One of the most prominent features of the new education is the character and amount of laboratory work which is now required by our medical school. The new building of the Harvard Medical School, erected twelve years ago, showed the importance which its faculty attached to this means of teaching the student. Already the large addition of the Sears laboratory has more than doubled the facilities of this department of the school. The University of Pennsylvania has felt the necessity of increasing the facilities of laboratory work and has received a munificent endowment for its department of hygiene. The literature of this part of our educational system is already becoming voluminous. The recent reports of Vaughan and Holmes in behalf of the work done at the University of Michigan and of the College of Physicians and Surgeons of Chicago, respectively, show the interest which is taken in this subject in some of the Western schools.

General chemistry forms so large a part of the first year's work in the Harvard Medical School that it is proposed to make room for other valuable work by making this study one of the requirements of admission. This course is already anticipated by most of the college graduates. The course on embryology and histology is at present a required one, and lasts throughout the year. Students are obliged to keep books in which drawings are made of the specimens studied and these books are examined by the teacher. Those who do not possess microscopes are provided with them by the school, and the equipment of this department enables it to handle classes of 150 students. Prof. Minot, who conducts this course, urges the addition of a course on biology to the work of the first year, as it would not only enable the student to pursue many of his studies more intelligently, but would add greatly to the value of all original work done by the student or physician.

The new four years' course has been so arranged that the technique of bacteriology come in the first year. This is a time when the student has more time for laboratory work, and it paves the way for special work in the study of these organisms in connection with pathology, which is placed in the second year. I shall leave a more detailed statement to Prof. Ernst, who will have something to say upon this subject later. Bacteriology needs no special plea to-day. It cannot even be regarded as a purely scientific study. No practitioner of medicine or surgery who emerges from one of our schools to-day should be considered properly equipped for his work unless he has been trained in such a laboratory. No physician can expect to unravel the secrets of disease without a practical knowledge of the demonstration of certain forms of bacteria, and there is certainly no better school for aseptic surgery than the bacteriological laboratory.

The study of pathology at the Harvard Medical School (Bulletin of the Harvard Medical School Association, No. 4) is conducted by Professor Councilman, not only by lectures, but by demonstrations, recitations and exercises in pathological histology. The latter course, which has hitherto been optional, is now obligatory. The relation of bacteria to disease is taught by the study of certain types of disease, as tuberculosis, suppuration, pneumonia, etc.

Demonstrations are given twice a week a material obtained from the hospitals and private practitioners. This is a laboratory exercise. Individual members of the class are called upon to study the specimens. They then carry them around to the other members of the class and demonstrate and explain to them the lesions. Each student in this way has the specimen demonstrated to him. In the course on pathological histology the student is required to make drawings of the sections studied.

An opportunity is given to a certain number of men, who have gone through with their course in pathology to act as demonstrators the following year and to assist in teaching. Places are assigned in the pathological laboratory to a certain number of students who have done well in their studies, and opportunity is given them for special study or original investigation.

A type of laboratory course, which I think is peculiar to Harvard, is that on the application of bandages and surgical apparatus. It is a purely laboratory course, is given to students at the beginning of their second year and is confined to a detailed study and drill in the practical part of such work. Bandaging is taught upon the living subject and upon wooden models. The feature of this course which is perhaps most valuable is the preparation and application of all the forms of stiff bandages. In this way every member of the class learns thoroughly the elementary part of this work before he begins to practice upon patients in the hospital, and no student leaves the school without becoming an adept in the application of the stiff bandage.

Another subject which is receiving more and more attention yearly is that of clinical instruction. The weakness of this feature of medical education was one of the glaring faults of the old system, and arose out of the fact that hospitals were far less numerous than they are at the present time, and that, from the necessities

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of the situation, the independent origin of the medical school became a custom which has continued almost unimpaired to the present day.

In Boston the medical school flourished for nearly one-third of a century before its teachers realized the importance of this problem. A circular was then issued in 1810, in which the statement was made that "a hospital was an institution absolutely essential to a medical school." Would that all teachers of that time had realized sufficiently that fact and had educated the public to recognize the necessity of such a close relation of the two. Many of the older-members of this congress can remember the old-fashioned prejudice which resented the intrusion of students into the hospital wards. The theory of the trustee of that time was: This money was given for the cure of patients and not for the education of physicians. They could not be persuaded that the two interests were identical.

The change of feeling in more enlightened times was indicated by the benefactor of the great Johns Hopkins hospital. At the opening of that hospital in 1889 Dr. Billings showed the advantage of such a union in the following words:

"It is well known to those familiar with the subject that the sick in a hospital where medical instruction is given receive more constant, careful and thoughtful attention than do those in a hospital where no such instruction is given. The clinical teacher must do his best; keen eyes will note every error in diagnosis, every failure in results of treatment. Moreover, the very act of teaching clarifies and crystalizes his own knowledge in attempting to explain, the dark places become prominent and demand investigation, and hence it is that those cases which are lectured on receive the best treatment. I need say nothing here on the other side of the question; the value of properly trained physicians to the community and the necessity for hospital instruction in such training. Johns Hopkins understood all this, and especially directed that 'in all your arrangements in relation to this hospital you will bear constantly in view that it is my wish and purpose that the institution shall ultimately form a part of the medical school of the University.'"

The reaction in favor of clinical teaching is becoming daily stronger, and no school can hope to compete with the great schools of the country which does not have control of what is usually called "clinical facilities." This term must unfortunately still be used; for the number of schools which have a hospital of their own is yet exceedingly small. The union between the two is in most of our large cities becoming a more and more intimate one.

Another immense advantage which the possession of a hospital gives to a faculty is the control of appointments. Most schools are now obliged to select their teachers from members of the staffs of hospitals in their city who have services at times of the year which enable them to teach. These individuals are appointed by laymen who have no knowledge of or regard for the necessities of medical education. Faculties thus placed are unable to select teachers of national reputation, as there is no appointing power which enables them to give such a person the material with which to teach. This is a grave defect in our system, and one which the leaders in medical education should not forget to impress upon the profession and the public.

But, while applauding the movement in favor of clinical teaching it is perhaps well at the present time to consider whether systematic or, as it is usually inaccurately called, "didactic" teaching should be abandoned. The discussion as carried on in medical journals, appears to lean in this direction. A course of systematic lectures enables the teacher to cover ground which he would be unable to do, even in a clinic most richly endowed with material. The method of handling the subject differs entirely from that adopted at the bedside, and in a well regulated four years' course I believe the systematic lecture should still retain a prominent place. Clinical instruction should be abundant and of the most varied kind. Instruction of the class in small sections is a most desirable feature of this department. It involves a greater expenditure of time, an increase in the teaching staff and great ability as an organizer in the head of the department. It is the squad drill, however, which brings the student in most intimate contact with disease.

To carry out these ideals necessitates a "plant" far in advance of that which the average school now possesses. No such enterprise can be undertaken without that aid which has hitherto been conspicuous by its absence. I refer to endowments; the valuable paper of Dr. Bayard Holmes already referred to give some interesting data on this subject. He says:

"The productive funds in the hands of medical schools, both those connected with and those independent of universities in the United States was in 1889, $249,200, while at the same time there was in the hands of schools of theology productive funds to the amount of $11,939,631. The value of buildings and grounds used by medical schools at the same time was $4,047,614, and the theological schools were accommodated with buildings and grounds valued at $7,662,095. The medical schools had in 1889, 12,238 students who paid tuitions to the amount of $763,761, while at the same time the theological schools enrolled 6,989 students.

I am able to reinforce these figures by an abstract of the statistics for medicine, theology and technology as reported to the Bureau in June, 1892. The medical schools possessed buildings and grounds in 1892 valued at $7,507,937, and productive funds amounting to $611,214. Medical departments of State universities also received State aid in 1892 amounting to $40,500 which, if capitalized at 5 per cent, would be equal to an endowment of $810,000; making a total endowment of $1,421,214. There were 16,731 medical students in attendance.

The theological schools report productive funds

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amounting to $17,599,979, and stated, at the same time, the value of their buildings and grounds was $10 720, 860. They had 7,672 students in attendance.

Technological schools report productive funds amounting to $13,229,940 These institutions received from State appropriations or municipal aid in 1891–92, $747,504, which, if capitalized at 5 per cent, would be equivalent to an encowment of $14,950,080; making a total endowment for schools of technology of $28,180, 020. There were enrolled in the schools of technology 10,921 students, about one-third of whom were in preparatory courses. It will thus be seen that the endowment of theology is increasing at the rate of about two million dollars a year. The technological schools are well provided for, but medicine has scarcely raised its endowment, even at the most liberal estimate, to a million and a half."

Probably the available funds possessed by our medical schools are somewhat larger than these statistics show, but they give the proportions which are needed to impress upon us how little financial encouragement medicine receives. When we realize what a valuable factor the medical man is in the rapidly increasing development of the territory of a vast and prosperous country like ours, it seems as if his claims to receive encouragement should be listened to. He does not build railroads or organize society in new lands, but he is in the foremost rank of pioneers, with the complete equipment which our teachers can give him to day, and he becomes a most valuable member of society. He protects the young colony from epidemics; without him State medicine could not exist, and States could not be provided on a basis which could ensure prosperity.

These ideas should be impressed upon our men of wealth and upon the State governments as well. In the meantime it is important that we should adopt as a principle in our new departure in education that the medical faculty should have personal control of hospital wards and management. Let this work begin in a small way at first, but with a view to future development. Such a change can only be brought about by a slow process of evolution. The sooner, therefore, the principle is recognized and adopted, the better It is difficult for a prosperous school which has abundant opportunities for bedside teaching to realize this, but it can not develop beyond a certain point until it has established its own independence.

I cannot help believing that in this direction lies one of the greatest avenues of development of our system of medical education in the future.

South-Western Association of Railway Surgeons.—As may be seen from the titles of papers to be read and their authors the meeting of this asso ciation, which will take place October 26 and 27 in this city, promises to be one of great interest.

In addition to the reading of papers and their discussion, the scientific part of the meeting will consist in the holding of Clinics, These clinics which will be conducted by St. Louis Surgeons who will select the most instructive material at their disposal, will be held at the Alexian Brothers Hospital, the City Hospital and the Sisters Hospital and will add materially to the usefulness and success of the meeting.

The following papers have so far been annouuced.

Fractures and the Plaster of-Paris Dressing. A General Practitioners View, Robert F. Brooks, M.D., Carthage, Mo.

Concealed Injuries of the Abdomen. H. D. Hill, M.D., Augusta, Kas.

Are Immediate Amputations, after Crushing Injuries always Justifiable? Willis P. King, M.D., Kansas City, Missouri.

Amputations in Railway Surgery, B. A. Wilkes M.D., Bowling Green, Mo.

Traumatic Neurosis in Court, L. Bremer, M.D., St. Louis.

Treatment of Injuries to the Cranial Vault, Emory Lanphear, M.D., Kansas City, Mo.

Spontaneous Cure of Popliteal Aneurism, E. A. Neely, M.D., Memphis, Tenn.

Injuries to Back without Psychic Elements, W. B. Outten, M.D,, St. Louis.

An Anomalous Case of Appendicitis, W. N. Yates, M.D., Fayetteville, Ark.

Compression of the Brain, J. E. Tefft, M.D., Spring field, Mo.

Cases from Practice, W. B. Rogers, M.D., Memphis, Tennesee.

A Method of Applying Plaster-of Paris Jackets, Wm. A. McCandless, M.D., St. Louis.

Symptoms Caused by the Electric Light.—Freeland has reported the case of an electrician, who was suddenly seized with intense pain in both eyes and severe headache. The eyes were suffused and the conjunctivæ congested. There was marked photophobia and partial blepharospasm. The skin was hot and dry. The temperature was 102°. The free instillation of a five per cent. solution of cocain was soon followed by a subsidence of pain and a desire to sleep. After little more than an hour, however, the man became wildly delirious. The administration of fifteen grains each of potassium bromid and chloral was followed in half an hour by quietness and sleep. An ice-bag was applied to the head. The man slept for several hours, meanwhile perspiring quite freely, and on awaking felt much refreshed and was quite rational, although somewhat shaky The pain in the eyes and head had gone, but the eyes were still suffused and injected and intolerante of light. The temperature was normal and the skin moist. The man was kept in a dark room for the remainder of the day, and on the following morning was able to resume his usual occupation. It was learned that he had had charge of a powerful electric search-light and had neglected to wear protective goggles.—*Brit. Med. Jurn.*

NOTES AND ITEMS

Raw Pancreas in Diabetus Mellitus.—Following the analogy of the treatment of myxedema by thyroid juice, experiments have been made in several English hospitals of feeding raw pancreas to cases of diabetes. White finds that most patients take the raw pancreas quite easily. The patients gained in body weight and felt better; but in most cases the amount of sugar and quantity of urine was not diminished, although in some it was.—Boston *Med. and Surg. Jour.*

Frontal Headache.—Dr. Campbell claims (*Brit. Med. Journ.*) that there is close relation between the common sensibility centers because the common sensibility centers of the eyeballs and neighboring frontal region are liable to constant irritation, on the one hand through the common sensibiliay centers of the eyeballs, as in eye strain, and on other hand through the sensitive retina and visual centers, as by bright lights and colors. These common sensibility ceuters are so habituated to the algetic state, that they assume it under general morbid conditions. Frontal headache occurs in diverse states, in which neither retina nor ocular muscles are necessarily involved.

Injections of Methylene Blue in a Tumor for Operation.—Dr. Lindner, of Berlin, (*Bullet. Med.*) reports a case in which a large tumor involving the left temporal region, the zygomatic arch and part of the cheek had been growing for a year. It was elastic non-fluctnating, regular in shape and immovable. The diagnosis was malignant sarcoma of bony or periosteral origin. Under Von Mosetig's treatment, the ulcerations closed and the tumor disappeared completely. Injections of methylene blue at 1% were administered every other day at the periphery of the neoplasm. Marked swelling, some edema, and on one occasion an abscess resulted, and in four weeks the tumor had diminished one-half. The improvement continued after the treatment had cessed.—N. Y. *Therap. Rev.*

Calomel Soap in Syphilis.—Watraszewski describes (*Therap. Gaz.*) the preparation of the soap as follows: The calomel, in the form of vapor, is mixed with a potash soap, in strengths of 1 to 2 and 1 to 3. It forms a soft mass of a white color. From two to three grammes of the soap should be rubbed in every day. The inunctions should be carried out in the following manner: The parts to be rubbed should first be washed with ordinary soap and water, and the patient then having taken a bath, the soap should be applied and rubbed in with a rotatory motion of the hand for from ten to fifteen min utes. The advantages of this method of treatment are as follows: Its application takes but little time. The soap is odorless and colorless and it does not soil the linen. The inunctions never irritate the skin, except when applied too often in the same region. The rapidity of recovery corresponds in time to that resulting from the use of blue ointment.

Journal of the American Medical Association.—An editorial in the *Times and Register* for July 22, in speaking of the *Journal of the American Medical Association*, says: "It is a humiliating spectacle to see this Journal embarassed for funds and threateded with extinction in the near future." We desire to remark that there is no need for the extinction of the *Journal of the American Medical Association*, either in the near or distant future, if it is properly managed and carefully edited. It has been the lack of proper management and editorial sufficiency that has placed it in its embarassing position. But we are in hopes that with the change of the editor which has recently taken place this condition of affairs will be overcome and prosperity be perched upon the banner of the association and its journal.—*Railway Age.*

The Use of Cocaine in Small-Pox.—Dr. Samayoa, of Guatemala, after using this alkaloid in several cases of small-pox, states his results as follows;

1. Cocaine given continously from the beginning can completely abort the disease.

2. If given after the eruption has appeared it will transform confluent or hemorrhagic into discrete forms.

3. Sometimes when the cocaine is given from the beginning of the disease the eruption assumes a corneal aspect, and the pustules fall very soon.

4. Cocaine prevents suppuration, hence there is no secondary fever and no marks remain on the skin.

5. To obtain these results it is necessary to give cocaine as soon as the initial symptoms appear, and must be continued without interruption.

6. The best preparation is the hydrochlorate, and should be continued five or six days or even nine if necessary.—*La Escuela de Med., Pac. Med. Journ.*

Treatment of Hemorrhoids by Electricity.—Dr. Barton (*Univ. Med. Mag.*) employs the following methods in the treatment of hemorrhoids, which in all of his cases caused a decided decrease in the tumors, without secondary hemorrage, sloughing or after-pains. He makes use of an instrument consisting of a long pair of forceps, similar to urethral forceps, insulated with vulcanized rubber except at a place one-half an inch in length on the face of the blades. By means of a binding screw the forceps can be connected with the the positive pole of a battery. The hemorrhoid is seized with the forceps in such a manner as to have the exposed metal of the blades clasp it at its base. The negative pole is connected with disk or needle holder, preferable one containing four needies. Arter grasping the hemorrhoid with the forceps, a few drops of a 4 per cent.

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solution of cocaine are injected into the tumor. The needles are then pushed into the center of the tumor, and a current of from five or ten miliiamperes turned on. Immediately there will be noticed an escape of hydrogen about the needles and a decided blanching of the pile. The current should be be kept on until the tumor be comes a whitish gray, usually requiring from two to five minutes of time.

There are some points necessary to observe in using electrolysis in this class of cases: Thoroughly empty the colon before operating. Disinfect the tumor before introducing the needle. Never use this method in acutely inflamed hemorrhoids. The needles should be boiled before using.

Obstetrical Don'ts for Beginners.—We take the following from the *American Practitioner and News:*

1. Don't indulge in the routine practice of administering ergot after every labor; only give it where there are indications of impending hemorrhage.

2. Don't give vaginal injections prior to the parturient act; it may do very well in hospital practice, but it is often the means of conveying infection in private practice.

3. Don't allow the mother or nurse to dictate your management of the case.

4. Don't use pads, cloths or binders that have been used before, unless they have been thoroughly boiled and immersed in bichloride solution; it is better not to use them at all.

5. Don't leave your patient until all danger of post-partum hemorrhage is over.

6. Don't fail to have your hands, body and clothing clean, and always thoroughly wash your hands and arms before touching the patient.

7. Don't allow your desire to save time cause you to use forceps.

8. Don't indulge in too frequent vaginal examinations.

9. After the completion of the third stage of labor, don't touch the parts again so long as the patient continues to do well, save for cleanliness and removal of pad—and trust this to the nurse.

10. Don't fail to instruct the nurse to burn all cloths and pads immediately after removal from the patient.

11. Don't allow the nurse to use old pieces of linen, etc., as vulval pads, unless they have been previously boiled and soaked in bichloride, and dried before being placed upon the patient; the best pads are made by inclosing a piece of absorbent cotton in bichloride gauze of proper size, and fastening to the binder behind and in front by means of safety pins; the wood-wool pads are also very good.

12. Don't use chloroform except when necessary to allay the severity of the pains, or where forceps are indicated; it should then be given to complete anesthesia; its use always increases the danger of post-partum hemorrhage.

Do Not Fail to Write Messrs. Hall & Ruckel, 216 Greenwich Street, New York, who will send the readers of the MEDICAL REVIEW a sample cake of Sargent's Thymoline Soap, free. Shis soap is far superior to the super odorous carbolic soaps used so largely by medical men and surgeons which are in the highest degree obnoxious to the sense of smell.

A Uterine To: ic.—There are medicines that act specifically upon the uterus. Notably among these are viburnum prunifolium, cohosh, skullcap and aletris, all of which are active ingredients of Dioviburnia, in which are combined also antispasmodics and tonics that render it effieient in all menstrual disorders. Try Dioviburnia in uterine diseases. See advertisement.

Elixir Six Iodides in Syphilis, Etc.—T. J. Kneuper, M.D., 119 East 123d Street, New York City (late City Physician and Acting Police Surgeon of Second District, Jersey City, and Surgeon 11th Regiment, N. Y. S. M., etc.), says: "I have treated two cases of chronic general syphilis and one case of papular eczema with Elixir Six Iodides (W. G's.), and am free to confess the preparation is the best I have ever used whilst in practice.—St. Louis *Med. and Surg. Jour.*

Sennine in Burns, Scalds, Etc.—Sennine mixed with equal parts of flour, bismuth, bicarbonate of soda or with linseed oil or vaseline and applied freely to burns, scalds, abrasions, and in all cases where the integument is destroyed or broken, forms one of the very best possible applications and effectually prevents the ingress of any bacteria thus securing a restoration of the injured parts without suppuration. Applied as above Sennine coagulates the blood serum, forms an efficient coating which is impervious to air and thus promptly relieves the pain in such cases.

BEEMOUT, MO., Sept. 16, 1893.

WATERHOUSE PHARMACY CO., ST. LOUIS MO.:

SIRS—Some time ago I received samples of your Uterine Wafers. They did excellent. There was a young lady here who got prolapsed womb from jumping the rope. Several doctors here treated her. The leucorrheal discharge was profuse. She had worn out two syringes in treating herself. These tablets relieved the trouble at once. I like them better than any other in the market.

F. BEYERSDORF, M.D.

Chorea and Migraine.—Neurosine will be found to exert a markedly beneficial effect upon chorea with no deleterious influence upon the stomach of the child. Hammond says of chorea: In this country zinc is probably more used than any other single remedy. I have employed it in many cases. * * * My preference used to be for the sulphate which I gave in gradually increasing doses of from 2 to 3 grains up to 20 to 30 grains three times a day. Lately, however, I have used the bromide with even better results." (Diseases of the Nervous System, page 744).

The remarkable benefits derived from the use of Neurosine is the distressing attacks of migraine may in a measure be attributed to the presence of the aromatics and their influence in correcting any gastric derangements, but in this affection Canabis Indica and the bromides are so uniformly efficient as to render them almost specific. Erlenmeyer strongly advocates in migraine a combination of the bromides of potassium, sodium and ammonium and claims a more permanent effect than when given alone.

Pepper's System of Medicine, vol. v, p. 1223. The author says: "Of drugs used to control the liability to the attacks, the most important is Cannabis Indica given in doses of about one-half a grain of a good preparation of the extract several times daily."

Of migraine Wharton Sinkler says: "Cannabis Indica is probably the most potent remedy which is at our command. Its effects are most decided, and many cases of severe hemicrania have been cured by this means alone." (Pepper's System of Medicine, vol. v, page 413).

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ORIGINAL ARTICLES

The Continued Fevers of Texas Classified.

BY B. F. BRITTAIN, M.D., BAIRD, TEXAS.

Read before the Texas State Medical Association, at Galveston, May 3, 1893.

The continued fevers and their differential diagnosis have engaged the attention of all classes of physicians in our State, for a long time; but the question has never been satisfactorily settled.

A good many intelligent physicians are constantly speaking about a continued catarrhal fever, typho-malarial, continued malarial, typhoid fever, slow fever, thermic fever, febricula, and so forth. So many classifications are made of our two common febrile disorders that medical men of great experience are often at a loss to know what a writer means when he speaks of six or perhaps more of our continued fevers, instead of referring to a more natural classification and grouping all of them under two headings, that is, typhoid fever, typical or atypical, and malarial fever.

The majority of the thousand of cases of so called slow fevers, when continued malarial fever is eliminated is nothing more or less than typhoid fever.

When called to these cases, if we could comprehend the practical importance of making out our diagnosis, and bearing in mind that all our continued fevers belong to one of the two groups mentioned, our task of classifying would be very much simplified. If all the cases belonging to either one of the two fevers, were typical, there would be little trouble in placing them where they belong. But it must be admitted that the symptoms of the typhoid malady bear often such a resemblance to those of the continued malarial fever, that I confess, that at times I have been greatly puzzled in making a diagnosis. The classes of cases referred to here are often observed where malaria is rife, as, for instance, in Cherokee county where I practiced a number of years; and a physician is quite liable to pronounce a given case typhoid, when subsequent events prove it to be malarial, and *vice versa*. I am not the only one who has been confronted and confused with this difficulty; the error has been made by every doctor who has practiced much where these two fevers prevail in the same community. Osler in his work on the Practice of Medicine, confesses to have made the mistake more than once by sending to the hospital patients believed to be suffering from typhoid fever, when the disease was afterwards found to be malarial remittent. On the other hand, mild or abortive attacks of typhoid are often mistaken for thermic fever, febricula and so forth.

In every community typhoid fever may prevail in a typical form; and yet cases are met with in which the symptoms are mild, or, again, lack many of the phenomena peculiar to the disease. But because of this lack it is no fair argument to say that they are not real typhoid cases. If we can satisfy ourselves by an examination of the blood, or otherwise, that such cases are not malarial, it follows as a logical sequence that any given case is typhoid.

I think every one who has seen much of typhoid fever, will bear me out in the statement that in the same community, and sometimes in different members of the same family, grave cases (exhibiting hemorrhage from the bowels as a prominent symptom) and mild cases (fever not exceeding 102° F., no headache, no delirium, no diarrhea, no tympanites) exist side by side, and do what we will, the mild attacks continue often as long as the more serious forms of the disease. This being an admitted fact, who would have the temerity to place these mild cases anywhere except under the category of typhoid fever where they undoubtedly belong?

There are, again, cases occurring at the same time, that exhibit varied phenomena, but that are to be classed under the typhoid group; such cases, for instance, in which a patient gets a smaller dose of the poison, or else is better able to stand the same amount than another patient. He has 1 or 2 degrees of temperature above the normal and shows indisposition to bodily or mental activity; keeps about all the time, attending to his customary daily occupation though in a sluggish manner. His fever often continues two to four weeks, although it sometimes disappears in a week or ten days. These exceedingly mild cases are called, properly enough, cases of walking typhoid.

To make a positive diagnosis in many cases that I have seen, and in some cases observed by Osler, would be almost impossible without a microscopic examination

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of the blood. Of course, taking the view that I do, of the proper classification of our continued fevers, every thing else but typhoid and malarial diseases can be set aside, in arriving at a conclusion regarding the proper diagnosis. Every one who has had much to do with the two febrile disorders, where they are prevalent in the same section, is struck with the similarity in the symptoms between typhoid fever and malarial remittent.

Enteric fever is often ushered by ordinary chills and fever, and who is it that has ever treated many of these cases, that has not at times given a prognosis of speedy recovery? Yet, the patient continued ill for several weeks, suffering from a feverish reaction, hemorrhage of the bowels and other characteristic symptoms of the disorder having, in the mean time, manifested themselves.

It has been stated by Wynter Blyth (Sajous' Annual of the Universal Medical Sciences, 1892) that ulceration of Peyer's patches might be caused by various microbes that it was a common condition or accident and not pathognomonic of enteric fever. But the weight of authority points to the fact that, occurring in a continued fever, with or without hemorrhage, the ulceration of the patches is pathognomonic of typhoid fever.

After all, only a careful bacteriological examination of the blood, can lead us to make a proper differential diagnosis between our two forms of febrile disease. Therefore, if an examination of the blood of any of our patients suffering from continued fever, fails to reveal the *plasmodium malariæ*, we can set it down as a fact that the case is one of enteric or typhoid fever. I have stated that this affection is the prevailing febrile disorder in our State, outside of the malarial disease. Of course the typhoidal malady includes the thousands of cases, often very mild, that do not belong to the malarial group.

Let us see if authorities bear me out. I will refer in the first place to Professor Bowling's method of diagnosing typhoid fever as it prevailed in Tennessee and Kentucky a quarter of a century ago. In addition to mild purgatives he gave sulphate of quinine quite freely for three days, and this measure failing to arrest the fever, he pronounced the case one of typhoid. He taught that the fevers did not run into one another; that if the case started out malarial it ended as malarial, and if it started out typhoid fever it ended as typhoid. That was a true statement then and will hold good for all time to come.

C. H. Wilkinson, of Galveston, wrote Prof. Flint a few years ago, detailing the symptoms of our so called fevers and requested him to make a diagnosis. I have not the article before me but the substance of the answer was, that the symptoms were those of typhoid fever.

Dr. H. A. West, of Galveston, I think entertains views similar to my own in regard to the grouping of our continued fevers. He does not fail to recognize the fact that a great many cases, called by other names, are in reality enteric fever notwithstanding their lacking many of the distinctive symptoms. In his paper of four years ago he quoted from writers such as Fagge, Hutchinson, Loomis and Strumpell, to show that typhoid fever may exist without exhibiting characteristic phenomena. He said: "It is useless to further multiply quotations. I could proceed and illustrate the fact from every recent authority of note that there are many departures from the typical course of typhoid fever and that if we expect to find in every case what is called the typhoid condition, many will be overlooked and called by different names, that is, gastric fever, catarrhal fever, simple continued, mucous and nervous fevers."

Wilson and Eshner (Sajous' "Annual of the Universal Medical Sciences," 1892) say that "The fevers of the southern United States is still a matter of discussion. Barber and Howet conclude that the disease is really enteric, while Shepard considers it a hybrid affection, one element predominating in certain localities, another element in other localities. Mason states that in Arkansas there occurs a continued fever known as slow fever which is most prevalent in autumn and winter and which sets in with a chill followed by fever, headache, nausea and tympanitis."

Quinine, Mason states, does no good but often harm in such cases. If our brother physician from Arkansas would come down to Texas we would show him very many cases similar to the ones he describes, and he would find out that many of us call the affection typhoid fever.

From statements made in the same Annual referred to, we learn that the typhoid germ may occupy the spleen and mesenteric glands, without doing any injury to the patches of Peyer. Any one, therefore, making an autopsy and finding those patches healthy and not infested with the typhoid germ, is not justified in giving the affection another name till an examination has been made elsewhere for the germ.

Osler in his work on Practice, says: "It is very important for the practitioner to recognize the mild type of typhoid fever, often spoken of or even regarded as simple febricula", and further states, "the diarrhea is variable, sometimes it is not present. In such cases the symptoms may continue 16 to 20 days." In the abortive form the symptoms of onset may be marked with shivering and fever of 103° or higher. The date of onset is definite, on which Jurgeson lays great stress. Rose-colored spots may occur from the second to the fifth day. Early in the second week or at the end of the first week, the fever falls, often with profuse sweating and convalescence is established. In this abortive form, relapses may occur and may occasionally prove severe. When typhoid prevails extensively, these cases are not uncommon."

It will be seen, then, that Osler recognizes the fact that a great many cases of fever now known to be typhoid used to be called by other names, such as billious attack, febricula, slow fever and so on.

Hereafter, during a severe epidemic of typhoid, it will be well to remember the statements of Osler, as it will enable us to account for many irregular cases that might otherwise be very puzzling.

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EDITORIALS

L. T. RIESMEYER, M.D., EDITOR.

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

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Basedow's Disease.

There are three different views in regard to the pathology of this disease. Some claim that the symptoms of Basedow's disease are due to an affection of the sympathetic nervous system, others that they are caused by a pathological activity of the thyroid gland and a third theory, that the seat of the disease is located in the central nervous system has lately received an additional support by the developments of a post-mortem examination made by Mendel, who found distinct pathologi cal changes in the restiform bodies and the solitary fasciculi of the medulla oblongata. Filehne, Durdufi and Bienfait have shown that in rabbits and dogs symptoms of Basedow's disease may be produced by lesions of these anatomical regions of the brain.

Some of the symptoms of Basedow's disease: Exophthalmos, enlargement of the thyroid gland, subjective sensations of heat and hot hands may be explained by vasomotor disturbances. Vomiting and gangrene of the extremities also point to lesions of the central nervous system, still, while it is highly probable that the latter is the seat of the disease, further investigations are necessary to satisfactorily explain all the symptoms occurring in the same.

In regard to treatment we do not think that anything is to be expected from the partial removal of the thyroid gland or the tying of any of the arteries supplying the same, and the favorable results reported of these procedures are probably only coincidences, or as Struempell remarks, not cases of typical Basedow's disease. With the present imperfect knowledge of the pathology of the disease the indications for treatment seem to be the improvement of the general health, particularly of the anemia, by hygienic-dietetic means, mental and physical rest, balneo-therapy, electro therapy, and selection of climate and altitude suitable to the individual case. A great many remedies are mentioned in text-books, most of which being intended to influence the heart's action, for it has been observed, that by favorably influencing the heart the other disturbances become also ameliorated. For the anemia iron, arsenic and hypophosphite of soda may be used with benefit. Dr. L. Ph. Marcus, in a paper read before the fifteenth meeting of the Balneological Society at Berlin, recommends highly the bathing in ferruginous springs. The improvement taking place as a consequence of this treatment, excepting cases of serious complications for instance organic valvular lesions, being such that the patients are again enabled for many years to tend to their business and go to amusements. Good results may also be expected from sea-bathing, excepting anemic cases, and of a sojourn in high attitudes, but an altitude above 800 meters is not tolerated by most patients.

Intra-Cerebral Hemorrhage.

In an article published in the *Medical News*, September 30, 1893, Dr. J. T. Eskridge of Denver, Col., says the following about intra cerebral hemorrhage: Usually the first and most obtrusive symptom of intra-cerebral hemorrhage is apoplexy, or partial or complete loss of consciousness, more or less sudden in onset, and more or less prolonged in duration. In the majority of cases we have added the local or hemiplegic symptoms. In the severer forms of cerebral hemorrhage there is complete relaxation of all the voluntary muscles of the body, including the sphincters of the anus and bladder. In the milder cases there may be only slight obscuration of consciousness; in the severer ones, unconsciousness is profound.

In a typical case of cerebral hemorrhage, ushered in by marked apoplectic symptoms, the patient lies as in a profound sleep, with a tendency to stertorous and labored breathing. The skin is usually bathed in perspiration. The pulse is often full and bounding; sometimes it is small, rapid, and incompressible. The temperature, at first, in all but the milder cases, is lowered from 0.5° to 1° or 2°, but in a few hours it rises from 0 5° to 1° or more above normal. Immediately after the shock the temperature on the paralyzed side is lower than on the unaffected side, but in a very few hours it is higher on the affected than on the non-affected side. A careful study of the temperature is of considerable importance, both in the diagnosis and prognosis. The face is often flushed, but sometimes it is pale. The urine is at first abundant and of rather low specific gravity, but soon it becomes less abundant and has a

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high specific gravity. Sometimes it contains albumin, but no tube casts, unless there is some renal complication. Convulsions are more common in lesions of the cortex; vomiting is most frequently met with in lesions of the cerebellum.

In nearly all cases, except the severer ones, in which there may be complete relaxation of all the voluntary muscles of the body, there are local, or one sided symptoms. The most pronounced ot these is the hemiplegia involving the leg, arm, and face on the same side. In rare instances there is crossed paralysis, with affection of the leg and arm on one side, and of the face on the opposite side. When the hemiplegia is incomplete, the arm is most affected, the leg next, and the face least of all. The distal portions of the extremities are more affected than the proximal. Immediately after the shock the deep reflexes are abolished on both sides. They return first on the unaffected side, but they soon return on the paralyzed side and become more pronounced than in the unaffected limbs. The superficial reflexes not infrequently remain absent on the paralyzed side for several weeks. One pupil may be dilated and fail to respond to light, or both may be dilated or contracted. The eyeballs are usually fixed, and more commonly they deviate to the paralyzed side, although there may be conjugate deviation of the eyes with turning of head toward the unaffected side. The facial paralysis is limited to the lower part of the face, and the affected cheek puffs out during expiration. If the patient is able to protrude the tongue, it deviates toward the paralyzed side. Even when the unconsciousness is profound, the muscles on the affected side are not so completely toneless as those on the unaffected side. The local symptoms vary according to the seat of the hemorrhage.

In a given case of supposed cerebral hemorrhage, during the apoplectic state, the diagnosis has to be made from a similar condition caused by syncope, or by chloral, opium, or alcohol poisoning, or by uremia, epilepsy, hysteria, embolism, thrombosis, the apoplectiform attacks occurring from cerebral congestion or from the cerebral state found in paretic dementia, and from "simple apoplexy" in the aged.

Syncope from cardiac failure is easily distinguished from cerebral hemorrhage. In the former the heart's action is exceedingly weak; the pulse is small, very feeble, and almost imperceptible; the face is blanched; the lips are very pale; respiration is shallow, or it may be sighing and irregular; reflex action is rarely abolished; the sphincters are not relaxed; the pupils are equal and widely dilated, and there are no hemiplegic symptons.

Chloral-Poisoning.—In profound unconsciousness from chloral the subject is in a peaceful and undisturbed slumber; not a voluntary muscle moves, and all is calm. Breathing is rather slow and shallow, the pulse is soft, weak, and infrequent, and the temperature is usually slightly subnormal. There is complete absence of all local symptoms.

Opium-Poisoning.—The onset of the symptoms, if this is known, the equal and contracted pupils, the slow respiration, the normal temperature, and the absence of all hemiglegic symptoms, would point to opium poisoning. If the symptoms began suddenly with a general or a partial convulsion, chloral, opium, and alcohol poisoning could be excluded.

Alcoholic Unconsciousness.—An alcoholic odor of the breath, a coma from which the patient may be temporarily aroused by loudly calling his name, equal pupils, nearly normal temperature, and the absence of unequal temperature on the two sides of the body, point to alcoholic poisoning. Violent struggling, when it occurs, strongly indicates alcoholism. There are no localizing brain symptoms.

Uremic Coma.—Albumin and tube-casts in the urine suggest uremia, but albumin is frequently found in considerable quantity in the urine in cases of cerebral hemorrhage, especially if attended with convulsions, but tube casts are usually, if not always absent, except when kidney disease has preceded the hemorrhage. It must be borne in mind that renal disease, especially the senile form (granular disease of the kidney), occurs in about one-third of the cases of cerebral hemorrhage. The peculiar physiognomy of renal disease, with local dropsy, equal pupils, less profound coma, and usually nearly normal temperature (according to Gowers it is always subnormal, except in cases in which local inflammation exists), the presence of the odor of urine in the breath, and the absence of hemiplegic symptoms occurring in a young subject, are usually sufficient to diagnosticate uremic coma. Gowers states: Rigidity of limbs or local muscular twitching during the coma is, if constant in seat, in favor of cerebral mischief; if variable in position it is in favor of uremia.

Coma of Epilepsy.—If the history of the patient is known and the onset of the attack has been witnessed, no difficulty will occur in the differential diagnosis. If the patient is first seen in post epileptic coma, without any knowledge of his previous history, the absence of hemiplegic symptoms and the short duration of the coma would serve to distinguish the case from one of cerebral hemorrhage, except in the status epilepticus (a state rarely, if ever, reached without the history of the patient being known) when in the absence of a history of the case it would be almost impossible to exclude cerebral hemorrhage in which no hemiplegic symptoms are present. Fortunately for the diagnostician, in nearly all cases of cerebral hemorrhage attended by convulsions following each other in rapid succession, unilateral symptoms exist, but multiple thrombi and emboli may give rise to a condition resembling the status epilepticus without a single unilateral symptom.

Hysterical Coma.—I have yet to meet with my first case of hystericyl coma in which difficulty has been found in excluding cerebral hemorrhage. In the cases that I have seen, the absence of all positive symptoms of organic disease and the presence of hysterical stigmata have rendered the diagnosis easy. The face is

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rarely, if ever, paralyzed in hysteria. The danger of mistaking cerebral hemorrhage for hysteria is much greater, and in some cases can only be avoided by a careful search for symptoms of organic origin.

Apoplectiform Attacks of Cerebral Congestion.—In this condition the symptoms are general, with less profound unconsciousness than is found in cerebral hemorrhage. There are no local or hemiplegic symptoms. There is usually a history of previous similar attacks which have passed off without leaving any weakness of muscles. Gowers is inclined to the opinion that in first attacks of this character a positive diagnosis cannot be made.

Apoplectiform Attacks in Paralysis of the Insane.—The previous history of the patient is usually sufficient to put the physician on his guard. The seizure is ushered in suddenly with convulsions, local in seat, clonic and tonic in character; the head is drawn to one side; the muscles of the eyes and face may keep up a constant twitching for hours; unconsciousness is profound; the face is dark; respiration is shallow and rapid; the pulse is quick and weak; the temperature is elevated; a profuse perspiration covers the body, and the whole aspect of the patient points to speedy dissolution.

The seizure lasts for a few hours or a day, and is followed by a sleep from which the patient slowly wakes and gradually recovers consciousness. A day or two later, however, the patient is apparently as well as he was before the attack, except that mental deterioration becomes more rapid, with a tendency to the formation of bed sores and the development of other trophic disturbance. If one were called to see a patient in a first attack of this character without a history to guide him, a diagnosis from cerebral hemorrhage would be impossible. The same character of attacks occurs as a manifestation of cerebral pachymeningitis, and it is probable that these seizures in paralysis of the insane are due to hematoma of the dura, and the immediate cause is hemorrhage.

Simple Apoplexy.—In persons advanced in life a condition sometimes occurs with a train of symptoms that perfectly resembles that of cerebral hemorrhage, but at the autopsy no trace of hemorrhage or other gross cerebral lesion can be found. Such attacks are truly "mysterious" in their nature, and it frequently happens that they cannot be distinguished from cerebral hemorrhage.

Embolism.—The younger the patient, with the presence of endocardial disease or syphilis, the greater the chances are in favor of embolism against hemorrhage, except in cases in which the apoplectic symptoms have been very severe, coma profound and long in duration. The parturient state favors embolism. The less the primary disturbance of temperature, provided the paralysis is extensive, the less the chances are in favor of hemorrhage.

Thrombosis.—The differentiation of thrombotic softening from cerebral hemorrhage is probably one of the most difficult diagnoses that the physician is called upon to make. Gowers states that "Some writers contend that we can be sure of our diagnosis in only one third of the cases." He does not agree with this broad statement, and believes that by a careful analysis and comparison of the symptoms an accurate diagnosis can much more frequently be reached than might be inferred from the writings of some physicians.

An accurate diagnosis is of considerable importance because the treatment of the two conditions is entirely different. I will give the most important diagnostic points of each:

THROMBOTIC SOFTENING.	CEREBRAL HEMORRHGAE.
1. Prodomata frequent.	1. Prodomata infrequent.
2. Great degeneration of the arteries of the limbs.	2 Turgid face and strongly beating arteries of the neck.
3. Pulse soft and often very compressible.	3. High arterial tension, regardless of the size of the pulse.
4. Heart feeble, dilated, and irregular.	4. Heart hypertrophied and beating strongly.
5. Coma less marked in depth and duration.	5. Coma more intense and longer in duration.
6. Following grief and other depressing influences.	6. More likely to be induced by mental excitement.
7. Local convulsions more frequent.	7. General convulsions more frequent.
8. Slight initial temperature-disturbance.	8. Often great initial temperature-disturbance.
9 Slight variation of the temperature within a few hours.	9. Often a considerable rise of temperature from twelve to twenty-four hours after the attack.
10. Secondary inflammatory symptoms frequent and well-marked.	10. Secondary inflammatory symptoms less in frequency and in degree.

The foregoing is only an attempt to arrange the chief diagnostic points of thrombotic softening and cerebral hemorrhage side by side, but it must be evident to everyone that any one of the symptoms may be so modified by conditions and circumstances as to render it entirely valueless, *e. g*, sudden fall of temperature, succeeded a few hours later by a rise of several degrees, indicates cerebral hemorrhage, but in occlusion of the basilar artery the temperature may rise four, six, or even eight or more degrees, a few hours subsequently to the occurrence of the apoplectic symptoms.

Treatment of Cerebral Hemorrhage.—I must reiterate what I have said on former occasions in connection with the treatment of a patient while in the apoplectic state from cerebral hemorrhage, that most of such patients would do better without medicine than they do when medicine is simply administered with the hope of doing some good, but the administration of which is not governed by any logical or rational principle.

If we bear in mind that in hemorrhage into the cerebral substance, not traumatic in character, the immediate cause of the hemorrhage is the bursting of a miliary aneurism, we shall appreciate how futile must be our efforts to arrest such a hemorrhage by the administration of medicine. Immediately after the occurrence

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of the event the indications are to allow the effused blood to coagulate, to promote the flow of the venous blood from the head, to quiet the heart's action, to allay the restlessness of the patient, when such exists, and to prevent an undue amount of blood being carried to the head. We can render the best service in aiding the coagulation of the effused blood by keeping the patient absolutely quiet. The flow of the venous blood from the head is promoted by slightly elevating the head and shoulders, and not allowing the head to be bent forward and thus compressing the veins of the neck. The heart's action is best quieted by the careful administration of small and frequently repeated doses of aconite, when there are no contra indications to the use of this drug. Restlessness, when considerable, is most effectually relieved by a hypodermatic administration of one-fourth of a grain of morphine; when it is slight, sodium bromide is effectual. Various means are at our command to lessen the flow of blood to the head; sometimes one or two, sometimes all should be employed. Brisk purgation should almost always be resorted to. If the stomach is not irritable, one drop of croton oil in ten drops of sweet oil should be placed on the tongue every hour until the bowels are opened freely. When the stomach is irritable ten grains of calomel should replace the croton oil. Whether calomel or croton oil is employed, an enema, consisting of one ounce of salts, a half ounce glycerin, and four ounces of water, should be thrown up the large bowel as soon as possible after the occurrence of the hemorrhage. Mustard plasters applied to the back of the neck, the front of the chest, and on the calves of the legs, aid in lessening the quantity of blood carried to the head. Blood-letting is sometimes indicated, but cases necessitating the withdrawal of blood by opening a vein are probably rare. In regard to the administration of ergot in the cases of cerebral hemorrhage under discussion, I do not believe that it does a particle of good, and there is a possibility of its doing harm. The practice of applying cold to the head, especially ice, in cases of non traumatic, intra cerebral hemorrhage, is I believe, reprehensible. It seems rational to suppose that it may increase the engorgement of the intra-cerebral vessels. When the face is turgid, the head warm, and the carotids throbbing, ice-cloths or iced poultices may reduce the heat of the head and promote the coagulation of the effused blood.

It will be seen that the only routine treatment recommended for intra-cerebral hemorrhage is brisk purgation immediately after the occurrence of the accident, to which may be added the application of mustard plasters to various portions of the body. In the subsequent treatment, during the acute stage indications must be met as they arise. In the chronic stage electricity and strychnin must be used with judgment and great caution. The routine employment of these two agents to overcome the paralysis does much harm in causing irremovable contractures of the arm and leg of the affected side. In this stage strychnin should not be employed when contractures are present, or when the deep reflexes are greatly exaggerated. We must remember that no hard and fast rules can be laid down in regard to the use of strychnin. I have seen cases in the acute stage in which this drug, in combination with aromatic spirit of ammonia, has done good service. When electricity is applied, and, as a rule, it should not be before the end of the fourth or sixth week, the extensor muscles only should be stimulated, and during the application the extremities should be held in their normal positions. Massage, systematic exercise, Swedish movements, and time, do most to overcome the residual paralysis of intra-cerebral hemorrhage.

A Medical Directory of the State of Connecticut is being issued by the Danbury Medical Printing Co., of Danbury, Conn. It will contain a list of all the medical practitioners of the state, the various medical societies, all the dentists and dental societies, druggists and pharmaceutical societies, nurses and training schools for nurses, hospitals, etc. Price, $1, delivered free by post.

A Treatise on Ophthalmology. For the general practitioner. By Adolf Alt, M.D. Second edition, revised and enlarged. 8vo., pp. 346. With one hundred and forty illustrations. St. Louis: J. H. Chambers & Co. 1893. Price, $3.50.

We have been aware of the fact for some little time that the present edition was being prepared by the author. The additions and improvements made have perceptibly increased its dimenstons and added to its usefulness. The author has retained his first idea, that of furnishing an easily understood guide to the general practitioner. As he states, it is not a work written for specialists, and this will account for the fact that in certain parts a subject seems to be rather summarily dealt with and disposed of. The entire practical domain of ophthalmic therapeutics is well covered, and that of dioptrics and other optical questions connected with the eyes have been judiciously omitted as they are of too abstruse a nature for the readers for whom the book is intended.

Taken all in all this treatise will prove a valuable one in the hands of its readers. It is well illustrated, diagrammatic and other pictures being introduced wherever they may prove of help. No instruments are shown, the author referring his readers to catalogues which always contain a large number of representations of ophthalmological instruments. The matter has been carefully written and well edited. Whilst never prolix it is sufficiently full to be easily understood.

The mechanical work is a credit to the publishers. The type is large and clear, the illustrations show up well, and the paper is strong and thick. The binding is very neat, and, taken altogether, it speaks well for all those interested in the issuance of the work.—St. Louis *Medical and Surgical Journal.*

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ABSTRACTS

Treatment of Alcoholism by Large Doses of Strychnia.—The treatment of alcoholism by strychnia has found many advocates in Russia, especially since the clinical observations of Tolvinsky and Partivisky in 1887. They gave strychnia by the mouth in doses increasing from the sixtieth to the thirtieth of a grain three times a day. These doses seem small, but the results reported were favorable. The experiments of Jarokeosky on dogs in 1888 led him to formulate the conclusion "that strychnine enables the animal organism to receive large quantities of alcohol for prolonged periods without any apparent injury to the central nervous system."

Pombrak, another Russian authority, found strychnia a valuable remedy both in cases of chronic alcoholism and in those of dipsomania, "not merely curing the attacks, but abolishing the desire for drink." Even attacks of delirium tremens were influenced beneficially. He began with doses of one thirtieth of a grain; in more severe cases with one fifteenth of a grain.

It is worthy of note that Luton of Rheims first called attention to the remedial effects of nux vomica in alcoholism nearly twenty years ago. He was in the habit of administering one half grain of the extract or ten drops of the tincture three times a day in alcoholic trembling, in the cerebral troubles due to alcoholic poisoning, etc. It was Luton who called nux vomica the medicine of drunkards. Luton, however, recognized that nux vomica can have no beneficial effect when the alcoholism has arrived at the phase of plastic infiltrations and of granulo-fatty degenerations. Luton afterwards made trial of strychnine in hypodermic injections, and found that this drug when thus administered had marvellous efficacy in delirium tremens. Dujardin Beaumetz adopted this mode of treatment in delirium tremens, with equally favorable results. He uses the following prescription:

Sulphate of strychnia -	centigrammes 10
Cherry laurel water - -	grammes 10
Distilled water - - -	grammes 10

A hypodermic (Pravaz) syringeful contains five milli grammes (one-twelfth of a grain). In cases of furious delirium he makes an injection every half hour till four injections are given; then every hour, till the delirium is subdued. It is not an uncommon thing to practice these injections till two to four centigrammes (one-third to two-thirds of a grain) of strychnia are thus administered; and this treatment is pronounced "safe".

Lecuye, a pupil of Luton, who in 1882 wrote a treatise on "Alcohol and Strychnine," reports similar successes in the use of strychnine, and considers this drug as the remedy *par excellence* of the nervous, cardiac and gastric troubles of alcoholism.

The strychnine treatment of alcoholism has been tried in this country and in England with varying success, and has been adopted in many institutes for the cure of inebriety as a part of routine practice. Experience seems to be daily justifying some portion at least of the claims made for this drug by the enthusiastic advocates of its use in the treatment of alcoholism (and not the least of its merits is said to be its wonderful power of sustaining the heart under conditions of extraordinary depression), but it cannot be relied on to the exclusion of other remedies as nerve sedatives and hypnotics, or of the proper hygienic treatment.

Ocular Affections in Cerebro-Spinal Fever.—It would seem that all epidemics of cerebro-spinal meningitis have one or more eye symptoms in common, and probably those most often met with are the changes in the pupils and conjunctivitis. But every extensive epidemic is apt to be associated with a special type of eye affection. Thus Knapp, Dreitmair, Oeller and Jacobi observed most often suppurative inflammation of the uveal tract and make no particular mention of any other ocular complication. Wilson, Niemeyer, Ziemssen and Hess met with keratitis, while Hirsch, in his wide experience, saw nothing more serious than conjunctivitis, which was an invariable condition). The type of eye symptoms peculiar to the epidemic which I have just described seems to have been a remarkable tortuosity and distension of the retinal veins and more or less congestion of the optic disk The degree of venous engorgement in some of the cases was, in my experience, a unique condition, the blood appearing almost black and as though actually stagnant. The tortuosity of the veins, too, was striking. The turning points of the veins were so abrupt that they resembled small hemorrhages, and as such I regarded them in one case till I was enabled later to make a more thorough examination, when I found that what I took to be hemorrhages were very abrupt turns in the veins where the circulation must have been almost at a standstill. These conditions are quite analogous to what was discovered in the brain in every case where a post-mortem was made. I was not present at any of the autopsies, but Dr. Porter told me that the tortuosity and distension of the veins on the surface of the brain reminded him forcibly of my description of the retinal veins, and the changes in these vessels I think can readily be understood from the condition of the brain revealed at the autopsy.

It is clear, then, that in all epidemics of cerebro-spinal meningitis a systematic examination of the eyes should be made with the ophthalmoscope, and that frequently when other eye symptoms are absent and the general symptoms are misleading, changes in the fundus of the eye will be discovered which will throw light upon the case. And again, the existence of good vision does not mean a sound optic nerve or retina, for not unfrequently do we meet, in every-day work, with a choked disk where the visual disturbances are insignificant. Of the thirty-six cases which I examined, not counting those which were affected with diplopia, only

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three complained of their inability to see distinctly. I regard the existence of eye symptoms, especially those where the fundus is involved, as indicating a particularly grave case. Wherever I found the condition which I have described very pronounced, I felt justified in speaking positively as regards the prognosis. I think that this type of eye symptoms is of more value as indicating the condition of the brain than the symptoms described by other writers, such as panophthalmitis, suppurative choroiditis and keratitis, affections which, in my opinion, would be likely to have their origin in a general infection and not likely to be the direct result of the purely cerebral changes. — R. L. Randolph, *Johns Hopkins' Hosp. Bull.*

Phenosalyl.—Dr. J. de Christmas, Paris, says: My experience (published in the "Comptes rendues de la Societe de Biologie" of January 23, 1892 and in the "Annales de l'Institut Pasteur VI") has induced me to recommend an antiseptic combination "Phenosalyl") (The preparation is manufactured by the "Farbwerke vorm. Meister Lucius & Bruning in Hoechst on the Maine".), which according to bacteriological and clinical experiment appears to possess many advantages over ordinary antiseptic substances, and the employment of which in surgery has been sufficiently extensive to permit a reliable opinion as to its value to be formed.

Phenosalyl, a clear sirupy liquid, consists of a mixture of carbolic, salicylic and benzoic acids melted together and dissolved in lactic acid. The solution partially crystallises at low temperatures, but if a small quantity of glycerine be added a clear solution is formed which does not again crystallise, is easily soluble in warm water, to the extent of 6 per cent in cold water, and very soluble in alcohol and ether.

The results of all bacteriological trials with the mixture have shown that it possesses an antiseptic power considerably superior to carbolic acid.

This solution, the antiseptic power of which is sufficient to kill the bacteria of pus after 1 minute's contact has no corrosive action on instruments and does not irritate the skin. In Cornil's hospital division this solution has been employed in all surgical and disinfecting operations since July 1892. The results obtained have been very satisfactory.

Professor Fraipont in Luttich has recently published the results of his clinical experience with Phenosalyl. He has employed Phenosalyl in 100 major operations and in 68 confinements and expresses himself to be very well satisfied. In the conclusion of his communication he summarises the advantages of Phenosalyl over other antiseptics as follows: Easy solubility in water, no danger of toxic symptoms, a pleasant and not persistent odor, which does not cling about the hands and clothes. The solutions have no corrosive action on the skin; the mucous membranes remain smooth and slippery, and are not dried up, as is the case after washing with carbolic acid and corrosive sublimate.

It appears that Phenosalyl is not only valuable in virtue of its disinfectant properties, but that probably it possesses a specific action upon the inflamed mucous membranes, stimulating the regeneration processes. The following observations of Dr. Roskam in two cases of purulent cystitis point in this direction. In the first case, which had been $4^1/_2$ months under treatment, injections with boric acid and corrosive sublimate during the first 3 months had been without success, and eventually the patient lost all hope and withdrew from treatment. The patient was then treated with Phenosalyl in the following manner: After irrigation with boric acid a 2 per cent solution of Phenosalyl was injected into the bladder and the liquid removed after one minute by means of a catheter. A second injection of Phenosalyl was then made, which the patient retained in the bladder a few minutes and then spontaneously evacuated. After 4 such injections within 48 hours the patient was healed. In the second case a woman, 65 years old, passed urine containing an enormous quantity of purulent matter. She suffered from violent pains in the lower part of the body and had a continual desire to urinate; copious irrigations with boric acid, corrosive sublimate and silver nitrate solutions, as well as with salol, turpentine oil, etc., had been tried without result. Two injections of 2 per cent Phenosalyl solution made in the above manner effected a complete cure within 48 hours. Dr. Roskam examined both patients again 4 months after their recovery and found no return to the previous condition! These results appear to indicate a further action upon the mucous membrane than that of a mere antiseptic. (Dr. Berger of Paris has communicated to me orally an exactly similar case of purulent cystitis healed by Phenosalyl injection). Very rapid cures were also observed by Dr. Roskam in two cases of severe eczematous impetigo. After 48 hours' applications of compresses saturated with 1 per cent Phenosalyl solution healing was effected. In his reports upon the treatment of gonorrhea with Phenosalyl he says that he has been less fortunate with this treatment. A diminution of the suppuration was indeed observed immediately after the injection of a 1 per cent solution, but recovery only progressed at the usual rate.

Duloroy furnishes a detailed account of the course of several cases of endometritis and uretritis treated with 2 to 10 per cent Phenosalyl pencils. In several cases an extraordinarily rapid recovery was effected, and in one case of Endometritis puerperalis, the febrile temperature that had been maintained for 5 days disappeared after cuvettage of the uterus and subsequent Phenosalyl injections.

Phenosalyl also appears to have given equally good results in ophthalmic practice in the hands of Dr. E. Berger of Paris, whose observations have not yet been published. Dr. Berger has employed Phenosalyl as an ointment in blepharoadentitis (1 part Phenosalyl in 100 to 160 parts Vaseline), and as 0,2 to 0,4 per cent aqueous solution in different forms of conjunctivitis, without observing any irritation of the mucous membranes.

Finally it may be mentioned that Phenosalyl lends itself very readily to the impregnation of bandages and dressings, for which alcoholic solutions must be employed in the usual manner.

Biological Problems of Death.—In some of the recent German reviews this topic has been discussed at some length. Death is called a definite arrest and change of life. This can only occur among multicellular beings, and is not found among unicellular organisms. These latter increase by fission, growing to a certain stage, then dividing into two parts alike in size and structure. These organisms may be called immortal because if protected from violent death live on indefinitely. The individuals of these unicellular species on the earth to day are far older than mankind, and as old as life itself.

In the multicellular organisms, reproduction comes from certain germ cells in which the whole body participate. In the higher organisms of this class two forms of cells exist. One the somatic, the other the reproductive; the former suffer death and change, the latter continue. Death is simply adaptation to new conditions. Death does not necessarily follow reproduction, although the purposes of the organism are fulfilled in part by this act.

Life goes on continuously; the forms change by death and adaptation to circumstances, but one unbroken line of march exists from the first.

Reproduction is the point of change, when the forces of the old organism pass into a new state for the continuance of life under more favorable conditions. In a large class of organisms death follows this act. Death in old age is simply the limitation and end of the power of cell production. Life in the body is a continuous death and reproduction of cells. After a time the equilibrium is broken up, a certain class of cells become exhausted and die, and are not replaced or eliminated, and interfere with the functions and economy of the body. The division of labor in the cell organism is broken up, and some particular cell function is arrested. The dead and worn out cells are not replaced, and become an obstacle for the destruction and obstruction of other cells. The work which these cells fail to do must be done by others, whose normal activity will be taxed to its utmost, followed by early exhaustion and death. Both the cells and the reproductive cell function reach the limit of their existence; this is death. This cell life and renewal is finite, and death is simply the limit of existence. This may occur from shock in which this point is precipitated, and a sudden arrest of all these cell processes follows.

The utility of this process of change called death is a part of natural selection which further increases the preservation and distribution of new structures. It also enables the germ cell to enter into new forms of life, and escape from limitations which have bound it down Artificial death may appear at any stage of the organism, and the vital forces be overwhelmed and unable to continue cell life, and both somatic and germ cells perish.

The duration of cell life is governed by fixed conditions within itself, and the surroundings and their influence over it. The germ life goes beyond this, and is only limited by conditions essential for its perpetual existence. Death is inherent for cell life; an eternal prolongation of these cells would impede and be injurious to the organism. In the higher animals this prolongation of cell life takes place long after reproduction has occurred, obviously to assist and protect the new organism. Also the period of reproduction is greatly extended in the higher species, to provide against all possible danger of extinction.

The theory of the possible continuance of cell life in the organism, by some form of drugs that would suspend activity, is an impossibility, Each cell has a separate existence of its own, which comes to an end and is replaced by others uninfluenced by conditions only to a limited extent. The natural duration of life is only the measure of this existence in the cell colonies of the organism.

The germ cells continue a cycle that approaches nearer to immortality than anything we know of in nature. The molecular structure of somatic cells becomes worn out and dies, but the same structure of germ cells goes on rapeating itself, beginning again anew as long as favorable conditions continue.

Like the circulation of water on the earth, it is evaporated, condensed into clouds, falls to the earth as rain, and continues the never ending cycle. Interruptions may occur at different points, and its circulation vary. So the ceaseless round of protoplasm may halt and change for a moment, only to go on again in the same course. The mortal cells have their cycles and are replaced by others, and this continues until the large cycle of cell colonies is completed and what we call death follows, and the form or organism disappears.

This is the grand process of evolution in which life and death are inseparable, essential, and parts of the race progress.—*Journ. Am. Med. Asso.*

Aperient Pills of Sumbul: An Efficient Combination.—Dr John V. Shoemaker (*Med. Bull.*) says: Sumbul or musk-root, is an excellent antispasmodic and nervous tonic. Its action resembles that of musk and valerian. In small doses it stimulates appetite and improves digestion. It allays irregular nervous action and is beneficial in depressed or excitable condition of the nervous system. Sumbul may be very advantageously employed in the treament of hysteria, neurasthenia, neuralgia, functional irregularity of the heart, restlessness, the insomnia of chronic alcoholism, and nervous dyspepsia. The extract is given in the dose of ¼ to 1 grain. It is essential that it may be made from a pure specimen. As most of these disorders occur in neurotic individuals—especially women—with impaired nutrition, a morbidly sensitive organization, dyspeptic difficulties, and sluggish movement of the bow-

els. I have advantageously, in many instances, associated it with nervine and laxative remedies. The following combination which I have devised is now put up on a large scale by the well-known manufacturing pharmaceutists, Messrs. William R. Warner & Co. Each pill contains:

℞ Ex. sumbul, - - - - - gr. j.
Asafetida, - - - - - - gr. j.
Ex. cascar. sagrad., - - - gr. ss.
Aloin, - - - - - - gr. 1-10.
Ex. nucis vom., - - - - gr. 1-8.
Gingerine, - - - - - gr. 1 4.

M. The dose is 1 to 2 pills.

From a long list of cases in which the above pill proved of value a few examples are selected:

A light complexioned, florid young woman became subject to spasms of hysterical chorea. There were twitching and jerking of the muscles of the forearm and face. Two pills were administered thrice daily with excellent result. The paroxysms gradually became less frequent and at length ceased.

A woman was subject to aching pain in the loins, radiating to the pelvis and groin. Attacks of intercostal neuralgia also occurred; she was weak and often had palpitation of the heart. The patient made a complete recovery.

The same treatment was of marked benefit in the case of a woman who, consecutive to her first confinement, had suffered for nearly a year from palpitation, dyspepsia, constipation, mastodynia, headache and dizziness. The action of the heart was rapid and irritable, but there was no organic disease.

A lady, about five weeks pregnant, suffered from an almost constant headache and could not sleep well; was nervous, depressed, weak dyspeptic and constipated. The pills corrected the state of the digestive apparatus, banished the pains and nervousness and the patient progressed without special difficulty to the end of her term.

The Indications, Technique and Results of Operations upon the Uterine Adnexa — In a paper read before the German Gynecological Society, at Breslau May 25 27, 1893, Prof. Schauta, Vienna, (*Intern. Klin. Rund*) presented the following conclusions:

1. The frequency of inflammatory diseases of the adnexa comprises, according to the author's personal statistics, 1130 among 6315 cases, i. e., 17.8 per cent.

2. If the tube, as the result of inflammatory changes, has attained the thickness of a finger, a permanent return to normal conditions cannot be looked for.

3. The diagnosis of the contents of the cystic tubes (whether sterile or infected with gonococci, streptococci or staphylococci), cannot be positively determined before operation from the subjective or objective finding, or the temperature conditions.

4. Febrile temperature may be present before operation even in cases where the contents of the tube are sterile, while apyrexia may exist where the contents consist of pus containing staphylococci and streptococci.

5. Operative procedures are indicated when the tubes have become of the thickness of a finger and severe symptoms exist, and also in every case where pus collections in the tube can be demonstrated.

6. In the technique of operations upon the adnexa a bacteriological examination of the pus is of great importance. Such an examination should be made during operation if pus is encountered.

7. In cases of swellings of the adnexa of small size, in which no pus is visible during operation, the following method is employed. The pelvis is elevated and after complete separation of the adhesions of the adnexa to the neghboring parts and complete unfolding of the broad ligament, continuous ligatures are passed around the latter and around the isthmus of the tube and the adnexa then removed.

8. In cases of large tumors of the adnexa adjacent to the abdominal walls, after the abdomen has been opened the tube and ovary on the other side, which are usually more or less affected, are removed. Then the wall of the large pus sac is stitched to the parietal peritoneum, leaving free a sufficiently large space. The rest of the abdominal cavity is closed, and the pus sac punctured with a trocar, which is introduced between the edges of the abdominal wound into the free portion of the cyst wall. A portion of the contents are withdrawn and immediately subjected to a bacteriological examination. If this demonstrates the presence of sterile contents or gonorrheal pus, the sac is at once incised at that portion of its wall which is surrounded by the seam of peritoneum and washed out. The pritoneal sutures are then loosened and the sac removed in the ordinary way. If, however, the fluid in the sac contains streptococci or staphylococci, the operation is not proceeded with, and opening of the sac and drainage are postponed for four or five days, when peritoneal adhesions have occurred.

9. In cases of large pus sacs closely adjacent to the ovarian tissues, opening through the vagina is indicated. In general, however, the abdominal method is to be preferred, since, if the vaginal method be used, we deprive ourselves of the possibility of inspecting and, if necessary operating upon the adnexa of the other side.

10. In cases of pus sacs of medium size (from an egg to an orange) laparotomy should be performed, avoiding, as much as possible, injury of the sac wall. If in spite of this, there is escape of pus, a bacteriological examination of the pus should be immediately made. If it is sterile or contains gonococci, the operation is completed and the abdominal cavity closed in the usual manner. If it contains streptococci or staphylococci, Douglas' space is drained according to the method of Mikulicz.

11. Drainage of Douglas' space acts favorably by removing the secretions, but chiefly by rapid formation of the adhesions cutting off the drained space from the rest of the peritoneal cavity.

12. The mortlity of 216 cases operated upon by

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Schauta during the period from Feb. 3, 1888, to April 15, 1893, was 13, that is, 6 per cent. Of these 13 cases 2 died of pneumonia, and their death cannot be, therefore directly ascribed to the operation.

13. The mortality of cases of adnexa operations in which no pus, or only very little was found was 2.8 per cent (4:144) the mortality of cases in which streptococci or staphylococci were present was 2 0 per cent. (3 15); of the cases of the latter class where escape of pus had occurred after laparotomy and drainage had been resorted to 16 6 per cent. (1:6) terminated fatally; of those not drainad 40 per cent. (2:5); among those of laparotomy without escape of pus, those in which the operation was performed in two sittings, and those in which the vagina was opened there were no deaths (4 cases.)

14. To judge of the permanent result the material at the author's disposal consists of 121 cases. Of these 100 were free from disturbances of all kinds; in 17 a positive improvement had occurred; and in four the previous disorder was still present. The percentage of those cured by operation, therefore, amounts to 82.6 per cent —*Inter. Journ. of Surg.*

The Proteid Poison of Scarlet Fever.—Mr F. J. Bokenham and Mr. W Soltan Fenwick publish in the *Brit. Med Journ.* for August 19, a paper detailing their research on the pathological effects of certain substances derived from the spleen in cases of scarlatina. Their experiments were undertaken to find, if possible, some definite chemical poison in the organs of patients dying of scarlatina, which would give additional evidence as to the bacterial origin of the disease.

The spleens of fifteen patients were subjected to examination, with results of quite uniform character. From all cases there was obtained a proteid matter which may be classed among the proteoses, and is quite indistinguishable chemically from the proteoses formed during the process of digestion.

The injection experiments were upon rats, guinea pigs, mice and rabbits. The actual injection seldom caused any local disturbance. The constitutional effects varied according to the nature of the case from which the material was derived, but each perparation exhibited a uniform action in the various animals used. The proteid was highly poisonous when extracted from an acute case which had proved fatal during the first few days with symptoms of toxemia. If taken from the ordinary septic cases of a fortnight's duration associated with throat suppuration, the proteid was less poisonous and uncertain in its action. When the solution of the albuminous extract from a case of scarlatina fatal in one to five days was introduced under the skin of a rat in the proportion of 0.1 gramme per kilo. of its body-weight, no abnormal symptoms manifested themselves for a period of twenty-five or thirty minutes.

At the end of that time, the respirations became increased in frequency, and the animal's gait became tottering and extremely unsteady. Within a short time paresis of the hind limbs set in, the body being dragged along in an irregular and zigzag fashion by the sole action of the forelegs. With the development of this paresis the respiration became markedly slow and labored in character, the accessory muscles of the nose and mouth being called into requisition. Within half an hour from the onset of the symptoms the animal passed into a state of profound collapse. The heart's impulse was weak and its action quick, and the surface of the body was cold to the touch. After a varying period of time, gradual recovery took place.

The immediate temperature reaction varied, rats and guinea pigs showing a brief period of subnormal temperature, rabbits a corresponding short pyrexia, with a return to normal in each case within eight or ten hours. During the few days immediately following the animals appeared to suffer no particular inconvenience, and the temperature remained at its normal level. About the seventh or eight day, however, the appetite began to fail, the temperature rose slightly, and the body lost in weight. With only one exception (rabbit) death ensued within the fortnight, the rats exhibiting a uniform tendency to succumb about the tenth or eleventh day. The earliest period at which death occurred was the fifth day. When two injections were given on consecutive days the animal died on the fifth or sixth, and after three doses on the third or the fourth. In every case where it was possible to obtain a specimen of urine the presence of albumen was easily demonstrated, and in some instances epithelial and granular casts were also found.

Post mortem examination of the kidneys showed acute parenchymatous nephritis, with very slight interstitial changes.

The proteid obtained from the second class of cases caused much less disturbance and in no case death. In a majority of cases the kidneys showed some congestion and a granular condition of the cortex.

In order to control to some extent the foregoing experiments, two spleens derived from cases which had died from an accident were subjected to the same process, and the albuminous extract administered to animals. The material in question gave rise to no pathological effects. In like manner peptic albumoses, when injected into the circulation, never produced an inflammation of the kidney similar to that previously described.

They conclude, therefore, that in cases of rapidly fatal scarlatina a morbid product of a proteid nature is formed that can be extracted from the spleen in small quantities. This substance, when introduced into the circulation of any animal, is rapidly excreted by the kidneys, and acting as an irritant to the secreting structure, tends to produce a condition of acute parenchymatous inflammation.—Boston *Med. and Surg. Journ.*

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MEDICAL SOCIETIES

The Evolution of Surgical Principles.—We are indebted to the *British Medical Journal* for the following address on this subject by G. H. Hume, M.D., F.R.C.S Edin., Surgeon to the Royal Infirmary, Newcastle-on-Thyne, delivered at the annual meeting of the British Medical Association held in Newcastle on-Thyne, August, 1893:

When the British Medical Association met in Newcastle twenty-three years ago the office that now has fallen to my lot was occupied by an able and distinguished surgeon, no longer in our midst, The recollection of the vigorous and eloquent address which Dr. Heath then delivered, a recollection which I doubt not, even at this distance of time, is shared by all who heard it, increases the responsibility of the task I have undertaken. That the Council of the Association, which has grown so much greater and more powerful in the interval, should again have appointed as reader of the address in Surgery a local surgeon, can be interpreted only as a tribute to the traditions and acknowledged position of surgery in this portion of the kingdom, and by no means to the individual prominence of the representative selected. And deeply sensible as I am of the great honor inherent in the office, and reflected from the illustrious names of those who have filled it in the past, my sense of inadequacy and of diffidence in undertaking it are only thereby increased. When I turn to the fulfilment of my task, not the least difficulty is that which meets me on the threshold of selecting a train of thought on which to address so important an assembly. Engaged in the work of a large general hospital, and gathering experience from its varied service, I turn with readier interest to the broad principles of general surgery than to the elaborated details of any of its specialized departments. But in this I am guided towards a choice. And I have found further suggestion in an event which has already claimed the attention of English surgeons. This year they have been invited to celebrate the centenary of John Hunter, who, before, and beyond all others, laid the foundations of surgical science. And the year is not only the centenary of John Hunter's death, it is also the centenary of the publication of his "Treatise on the Blood and Inflammation," which Hunter looked on as the crowning work of his life, and of which his death came too quickly to permit the necessary revision. The year, therefore, carries our thoughts naturally to the principles which underlie and give stability to our work, it is our frequent boast that surgery has become, and is becoming, more scientific, and by an appeal to our results we justify the claim. But the science of surgery—and by the phrase we mean the principles of surgery—is nearly altogether the growth of the century that has followed Hunter's death, and its growth has been by no means one of continuous or steady progress—rather, as is usually the case in the development of scientific truth, it has been by fits and starts. The greater part of the work has been done in our own generation. And now, with regard to much of the art of surgery, it rests on principles so worked out and firmly established that the claim to scientific position can be made good. But with regard to much also we are still only struggling towards scientific truth. In speaking therefore of the development of surgical principles I shall endeavor to illustrate both classes—both those principles which, being in a sense perfected, have issued in enhanced success; and those also towards which we are still groping, and by which we have not yet been guided out of difficulty and uncertainty.

The "principles of surgery" is one of those elastic phrases which carry to our minds a fairly exact meaning, but to which we find it hard to give a concise definition. We certainly do not use it as the equivalent of theory. The surgeon who, thinking himself well versed in surgical principles, and therefore prepared to act in the best manner for the best reasons, would not consider himself justly described as a man of theory. And yet theories which become the motive or suggestion of surgical action are surgical principles, and these may be sound or unsound according to the character of the views upon which they are based. In so far as surgery is applied science, the data from which surgical procedures spring are in the strictest sense scientific principles; and we find that surgery advances by precisely the same methods as all other practical sciences. We have our inventions, our appliances, our practical details upon which an ever-increasing ingenuity and industry are expended. We have also sometimes our discoveries in medical or collateral science, which become the inspiration or rallying point of great practical advances. But the phrase covers more even than scientific data. The definite ends or objects of surgical action which are proper under given circumstances belong to the principles of surgery. So also do rules of procedure which the gathered experience of the past and present prescribes or sanctions. The mode of formation of surgical principles is therefore a double one. They may arise like a superstructure upon a foundation of scientific knowledge, or they grow down out of experience to be themselves part of the foundation. They are the mainsprings of action; and so far from being alien to practical efficiency, they are at once its inspiration and guide. One of the not least important surgical principles dictates scrupulous attention to the minutest practical detail; and he who, knowing that a life may hang on the integrity of a stitch, concerns himself anxiously about the method or material of a suture is only acting in faithful obedience to surgical principle.

Inflammation and Repair.

The mode of growth of scientific principles can find no better illustration than in our modern doctrines of surgical repair. The beginnings of these doctrines may be traced far back in the history of surgery. But

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it was by Hunter's work and in the pages of that "Treatise on Inflammation"—which, though pondered and labored through many previous years, as was Hunter's way, was not published till the year of his death—that the real beginning was made. Hunter's statement that "primary healing takes place without inflamma tion" contains the germ of what we believe and act up on now. It did not, of course, go far enough. It defined the relationship between what was then, as it is now, ideal healing and inflammation, in the case that no relationship can or does exist between them at all But there is no such definite expression to be found in Hunter's writings with regard to the modes of secondary healing. Hunter, I think, believed, as did most of his successors down to the last few years, that a certain degree of inflammation was necessary for these delayed forms of healing. Indeed, from Hunter's time there was a falling away from the faith, and we find the most philosophical surgical opinion as represented by Travers holding that a "subdued state of inflammation favors healing," and that to "supersede it would effectually retard or preclude" the process of repair.

I am sure, Sir, that to many in this audience it may seem to demand an apology that I should even mention in their hearing the name of inflammation. I may appear to be abusing my opportunities in carrying them back to their earlier days when inflammation was the bugbear of their surgical studies, a true snrgical *pons asinorum*. But I plead in excuse that down to a recent period the ideas of healing and the ideas of inflammation seemed in the very nature of things to be inseparably interwoven. It turns out that they were only need lessly entangled, and ideas which in the time of their confusion belonged mainly to the region of theory have since proved to be matters of the most eminent practical importance. The process of disentangling began in and proceeded with the elucidation of the true nature of inflammation and its consequent suppuration. There was a time when the four classical symptoms of pain, heat, redness, and swelling, summed up nearly all that was known of the process of inflammation. Then followed the anatomical era, the time most fruitful of bewilderment to the student, in which, thanks to rapid improvement in the methods of microscopical investigation, attention was concentrated in the blood stasis, the changes in the tissues and on the vessel walls, and on the out-wandering of the white corpuscles. An intermediate stage followed this in which, clinically and experimentally, the suppurative processes were recognized to be infective in their nature. And this culmi nated in the period in which we now find ourselves when the whole process is demonstrated to be due to the agency of micro organisms. One point, however, remains to be cleared up. Is the febrile access which follows an aseptic operation, sometimes sharp in degree though short in duration, to be looked on as the result of inflammation? There is no ground for supposing it to be an infective process the same in kind and differing only in degree from that which always tends to suppuration. If different in nature it should also be distinguished in name, and there is much to justify the proposal to restrict the word "inflammation" to those changes which result from the action of septic organisms, while the other and simpler process under some such title as traumatic reaction demands further examination for the clearing up of its intimate character. Such a defined use of the term would end the confusion which has hitherto attended the conception of inflammation as a disease, and would rest the idea to which the word corresponds on the sure ground of etiology.

Naturally with the true knowledge of inflammation and suppuration have come clearer and more accurate views with regard to the process of repair. Not alone in primary adhesion but in all forms of healing it is seen that inflammation is never a help, and can only be a hindrance, and that if it occurs repair must take place in spite of it, or be delayed until it has passed away. We have gone back upon Hunter's dictum, only we have given it a more extended, or rather an unrestricted, application. The surgeon's part, therefore, is now not to treat but to prevent inflammation and suppuration, and the practical side of the scientific evolution I have briefly sketched is the antiseptic system.

Asepsis and Antisepsis.

It has sometimes been made a reproach against the system of wound treatment, by the introduction of which Lister created an epoch in surgery, that its methods and details have undergone constant change. But through all the alterations of detail which the desire for greater simplicity or increased security have prompted, there has been no deviation of principle. The dependence of suppuration and septic diseases upon organisms, and the prevention of these diseases by destroying or getting rid of the cause, is the principle on which the treatment rests, and it is one which admits of some latitude in its application. The aim can be achieved in two ways. Either reliance is placed mainly on the germicidal powers of chemical agents, or the surgeon prefers to trust rather to the removal of the minute organisms along with the soil in which they flourish. The two roads to the same end we know under the names antiseptic and aseptic; and fortunately we are able in this case to travel on both at the same time. So far as our work is concerned, we have thoroughly learned the lesson that cleanliness takes no second place, that it is the highest virtue in surgery. Therefore we cannot err in sparing no pains to remove every particle of dirt from the area and all the accessories of an operation; and in addition we will not deny ourselves the further security which the use of some germ-destroying agent can give.

Those of us who have worked through the whole of the antiseptic period can in looking back trace with some interest the different phases through which the method has passed. I shall not trouble you with detail in a matter which is already chiefly of historical interest. But I may point out that the main changes in the

technique of the treatment have owed their origin to changing views as to the sources whence danger of infection might be expected to arise. Under the guidance of his earlier experiments, and in accord with the work of Pasteur and the investigations of Tyndall on floating matter of the air, Lister devised his measures for the avoidance of atmospheric contamination; hence we had sealed wounds, and later the spray. Gradually the belief strengthened that the air as a source of danger might practically be neglected, and we parted with the spray, with a sigh of relief. It had come to be admitted that our own hands and the skin of the patient, besides the instruments and sponges which had always been cared for, were most often at fault; and as a result even the most orthodox believers in the potency of carbolic acid or corrosive sublimate became scrupulous cleansers.

I have said that the antiseptic system admits of latitude in its application; it is open to every one to elaborate his own technique. The worst surgery, indeed, is the stereotyped surgery; the best is that which, working faithfully from sound principles as a science, encourages as an art fertility and variety in their application. But with whatever variety of method there ought to be now no grades in the standard of work sought to be accomplished. An ideal of healing which was only occasionally attainable by the many, or more consistently reached by the few as the result of fortunate circumstances, or the reward of strenuous care has become a generally accepted obligation. No one now is ever heard to speak of laudable pus; no pus is considered praiseworthy; but, on the contrary, if it appear in a wound for which the surgeon is responsible, and in making which he had the control of all the conditions, it is always a thing to be ashamed of. Healing without suppuration, therefore, is the end aimed at in all operation wounds, and in a sense it is an extended description of union by first intention. It applies to wounds healing by granulation, or by the organization of a blood clot, as well as to those uniting by primary adhesion. For all alike Hunter's description holds good: "If a wound heals by first intention all keeps quiet as if nothing had happened." And, by way of emphasizing the position that with such wounds inflammation in any of its stages has nothing to do, I will set with this classical quotation the description of primary healing wounds given by von Volkmann, one of the most distinguished and thorough of the German followers of Lister: "A primary healing wound several days after the operation ought to look exactly as if had just been stitched; no swelling and redness; no heat; no pain."

Illustrations of Reparative Surgery.

From trusting more, because knowing better, Nature's powers of repair, it has followed that the range of reparative surgery has been greatly widened. It is not now thought sufficient in bringing wounds together to pass our sutures through all the tissues at once, but each layer is separately stitched—muscle to muscle, fascia to fascia, skin to skin. This is one of the lessons which, if it did not at first teach us, abdominal surgery has been forward to utilize. The gain in abdominal operations is in a greatly strengthened cicatrix and the avoidance of ventral hernia. In general surgery the gain is in promoting healing by the obliteration of "dead spaces," and the consequent less frequent need of drainage. That the ends of divided muscle if brought accurately together will be reunited by proper muscle tissue, and not by interposed connective tissue, as was formerly supposed, is a fact of recent acquisition, but of some practical importance. In operations on the abdominal wall—especially in certain operations for the radical cure of hernia in which, as in Halsted's, the muscular layers are freely divided—their unimpaired reunion is essential for the success of the operation. It is necessary, therefore, that the muscles should be cleanly incised, and not haggled, and that they be afterwards exactly sutured; and the cases in which such plants of operating are the least likely to result successfully are those in which the repair of so complex a structure as muscle is interfered with by suppuration.

I pass now to a still more attractive illustration of the reparative powers of Nature. Skin grafting, according to the method of M. Reverdin, has long been a valued resource in hastening the cicatrization of granulating surfaces. But the method known by the name of Thiersch makes larger demands on tissue vitality, and is of wider usefulness. When a portion of the skin —it may be as large as an inch square—is detached and transferred to a recent and aseptic wound, it retains its inherent vitality until it becomes penetrated by blood vessels advancing into it from its new bed. It is thus fully adopted and incorporated in its new position. As if to explain the eager readiness with which the vessels and proliferating cells of the wound surface enter into and constitute an organic union with the new part, Thiersch has advanced one of those theories which, whether they prove in the long run to be well or ill founded, give by their aptness a special kind of mental satisfaction. By a legitimate scientific use of the imagination he supposes that a store of proliferating energy exists in the tissues which, in their intact condition, is kept in check by the mutual pressure of their elements. The constituents of the tissues, in other words, do not grow beyond a certain point for want of elbow room; but when this mutually restraining pressure is removed by a breach of surface their proliferating energy is set free, and by their liberated activity they become competent to carry out the work of repair. In its practical application the whole of a large open wound can be covered by this method of skin grafting, so that the wound shall heal by first intention. The size of the area that can be so dealt with is only limited by the possibility of obtaining grafts, which may be taken either from the same or another individual, or from a quite recently amputated limb. It is not necessary in removing the graft to take the whole thickness of the true skin. A portion of the corium left behind

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will, by obviating cicatricial contraction, lessen the sacrifice for that surface which is the donor, without diminishing the value of the gift to the recipient. In plastic operations on the face, and in operations for malignant disease which have involved free removal of the skin, the method has found useful application. But I would draw attention to a class of cases which have hitherto been as troublesome as they were uninteresting to the surgeon, and for which Thiersch's grafting holds out a welcome hope of cure. No class of minor surgical ailments gives more trouble in their treatment, or more certain disappointment in their relapses, than cases of chronic ulcer of the leg. For these the method of skin grafting can be made available. Bearing in mind the necessity of an aseptic condition of the bed upon which the grafts are to be placed, it is requisite, by paring the edges, and by thorough scraping of the surface with the sharp spoon, as well as by the use of antiseptic solutions, to surgically cleanse the ulcer. To get rid of the irritating effects of the antiseptics, they should be washed away by sterilized water before the application of the grafts. So treated, an ulcer is brought into the condition of a recently made wound, and success entirely depends on the thoroughness with which this transformation can be effected. A sufficiently extensive trial of this method enables me to say that its success is not uncertain; and that in the saving of time and in the excellence of the cicatrix, which contrasts strikingly with the attenuated and unstable scar left by the ordinary process of healing, it has advantages that commend it to your notice.

In the grafting and reimplanting of bone the incorporation takes place, no doubt, in the same manner as in the skin. We have learned, also, that the breaking up of the bone into small chips is not always necessary; at least that is not necessary in the case of the discs removed in trephining the skull. Provided these be of moderate size, they can be replaced whole. In a recent case of extensive fracture of the skull, I removed with Macewen's trepan three discs three eighths inch in diameter, and they were reimplanted without being broken up. Notwithstanding some neighboring suppuration from breaking down of an extensive hematoma, the reimplanted bone lived, and no trace of the trephining, so far as the skull is concerned, remains.

When we pass to a higher and more complex structure—that of nerves—I think it will be granted that the process of their repair is still imperfectly understood. In the direct suturing of the divided ends of the nerves it may be supposed that immediate reunion of axis cylinders with restoration of function may take place. But when a graft several inches in length is interposed between the widely separated nerve ends, and sensation returns in thirty six hours, what is the anatomical and physiological condition of the graft? Can it have become so vascularized, and have its axis cylinders acquired such intimate union with those of the nerve ends as to make it in so short a time capable of conducting impressions? Where return of the function has followed at a later date it has been supposed that the graft acted merely as a platform along which new axis cylinders developed; and this view has gained countenance from the claim which has been made on behalf of other structures, such as strands of catgut or portions of connective tissue, that they also have sufficed to re establish functional continuity. The whole subject appears to call for further investigation; and much also would be gained by greater and more explicit details in the records of cases. Too much value appears generally to have been attached to the return of sensation as an indication of success, whereas only restoration of motor power and the arrest of trophic changes can be accepted as unequivocal evidence of restored function.

Thus far I have endeavored to trace and to illustrate some of the applications of the great principles of surgical repair. The phenomena which this title covers have in their real character so little that is morbid that they constitute a well-defined department of surgical physiology. When now I turn to pathology, and seek to illustrate from that department the evolution of principles of action from scientific knowledge, I am faced by the whole range of surgical disease. It is only a truism to say that in the absence of a knowledge of its morbid appearances and of its cause no disease can be satisfactorily treated. But what is true in the abstract usually has its truth set in sharper lineaments when looked at in the concrete. I therefore select for illustration two disease groups—tubercle and cancer—especially on this ground, that they present instructive points both of similarity and contrast. If we follow the history of the pathology of tubercle we shall find it divided into periods which correspond to those already referred to in the history of inflammation. There was the period of physical form, when the name was given to whatever was a tubercle in feel and outline; there was the period of minute anatomy, when the disease consisted of special cells and cell groupings; and there is now the period which, since in it we have learned the essential cause of the disease, may be called the stage of real knowledge.

Before the microbic origin of tubercle was known surgery was becoming more aggressive in the treatment of so-called scrofulous disease. Scrofulous glands, for instance, were excised many years ago, at first against the protest of those whose minds were wholly influenced by the supposed constitutional origin of the complaint. The surgery of strumous joints also had long been both more conservative and more successful. But from the new light the surgery of tubercle has gained immense encouragement. The commencement of the disease in a locally infected area has modified and restricted the conception of a constitutional tendency. The constitutional origin has been changed into a constitutional vulnerability; and, undeterred now by an idea which weighed upon him just in proportion to its vagueness, the surgeon undertakes the treatment of local manifestations of tubercle by local measures. In consequence

the surgery of tubercle has undergone great extension. Affections of the skin, of the glands, of the bones and joints, of the urinary organs, of the peritoneum, wherever the disease can be reached and wholly removed, or its action favorably modified, it is submitted to local treatment. And the extension has been in the direction not only of new applications, but of greater thoroughness. The knowledge of the infective character of the disease, and of the liability to local relapses, or even general infection as a consequence of incomplete removal, has led, for example, to the excision of every affected gland or of every diseased focus in a joint. And the guidance afforded by pathological knowledge is even more explicit with regard to other points of treatment. The important question of general infection has light thrown upon it by what we know of Nature's endeavors to imprison by a wall of granulation tissue a tuberculous focus. When by an incomplete operation we break down this wall or cause it to crumble by infecting it with the pus microbes, without entirely removing the tuberculous disease, we open the way for the passage of the tubercle bacilli into the system. Hence the extreme necessity of keeping our operations free from sepsis, as well as of making them thorough. The success of the treatment of cold abscesses by evacuation, scraping, and flushing, and closure of the incision—the method known by the name of Mr. Barker—is only intelligible when their true pathology is known. Such a treatment could have no *raison d'etre* in the old idea that they were, as the name implies, pus-containing cavities. But when we know that they do not contain pus, but only the liquefied and broken-down products of the tuberculous process, we see the *rationale* of the proceeding, nnd we understand also the extreme danger of admitting secondary pyogenic infection into such cavities.

The substitution of arthrectomy for formal excision has its motive in the removal of all diseased foci and surfaces with the least possible interference with the integrity of the limb. Its occasional failures to effect lasting cure are explained by the readiness with which scraps of diseased tissue or tuberculous foci in the bone, may be left behind; and I anticipate in the future a partial return to the older and more searchinn operation. On every point in the treatment we deribe guidance from the pathology of tubercle; and we better understand also the limitation of our success. The nature and condition of the disease are such as to render at present inevitable frequent failure; but even failure is made more tolerable when we can trase its cause. The knowledge we already possess carries hope also for the future; hope that possibly in some combined surgical and special treatment we may find means that are more successful than the present; and hope of fulfilling one day a still higher function than that of curing, namely, that of preventing the disease.

The whole disease picture presented by cancer offers so many points of resemblance to that of tubercle, that the probability of a parasitic origin of it also has at present taken strong possession of the minds of pathologists. The occurrence of minute organisms of the class of sporozoaria in connection with cancer is, I think, held to be demonstrated; but any causal relationship between them and the disease has not been proved. We have as yet nothing beyond the nature of conjecture as to the essential cause of cancer; and as to many facts of secondary, but still great, importance in the natural history of the disease, we have to own that our knowledge is so vague as to be little better than ignorance. What can we affirm with certainty as to its local contagiousness, as to its contagiousness from individual to individual, as to its hereditariness, as to its prevalence in groups of cases due to endemic influences? On these and other points we are able to cite fragmentary evidence, but of any cogent array of facts which would suffice to definitely settle any one of them we are as yet destitute. On one point of importance there is agreement and a growing readiness to act upon it. Due largely to the influence of Mr. Jonathan Hutchinson, a precancerous stage of cancer is recognized; and it follows from the recognition that surgery ought to interfere during this period of suspicion. Another point of practical moment is brought out by the observations of Dr. Sims Woodhead and Mr. Harold Stiles on the channels of lymphatic infection, and referred to by the former in his Morton Lecture last year. These observations were made on cancer of the breast; and it is shown that whenever irritative or effete material has to be dealt with in large amount a special filtering tissue is developed. This, which consists of a growth of adenoid material, is formed in the connective tissue along the lymph channels, and is produced still more strikingly by the transformation of the small lobules of fat in the axilla. One of the great difficulties of dealing with cancerous disease is that we have no means of knowing when lymphatic infection first takes place. As the lymph circulation is always going on there is no reason why infection may not occur in the very earliest stage of the primary growth. If we are to trust cases of removal of the original cancer with no subsequent recurrence—that is, cases of cure—it may never occur at all. We do know that the infection may lie dormant for months or even years before it gives any gross indication of its presence. In dealing with it, therefore, we are meeting an enemy whose first invasion is invisible, and whose strength at any time we cannot even guess at; but all we know of its nature—both the old knowledge and the new—only points to the necessity of free removal. It indicates, I think—and my own experience is strongly in favor of the proceeding—the removal of the next group of glands along with the primary cancer, whether they show gross enlargement or not; and when an operation wound for excision of the breast and clearing out of the axilla can be healed by first intention under one dressing, there should be the less objection to extensive operations for malignant disease if only some additional security can be gained. The rules, then, enjoining early and free removal, and

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their application also to recurrences, so long as these are removable, are the broad principles which surgeons accept in dealing with malignant disease; they are the results of experience, and are confirmed rather than in the first instance dictated by scientific knowledge. To no subject in the whole range of medicine has there been devoted a greater patience in observation, a more continuous labor in inquiry than to the subject of cancer. The terrible character of the disease, the obstinacy with which it has refused to yield up the secret of its origin, the unsatisfactory results of its treatment, have at once fascinated and stimulated inquiries. The hope of now solving the problem by demonstrating its parasitic origin has enlisted a fresh band of workers whose skill and tenacity in their investigations will surely lead to some definite result. Our already accumulated knowledge about cancer needs only the central fact of what cancer is to fall into order and to become productive of practical good, and out of a then completed pathology we shall hope to forge some weapon of attack or defense which shall reduce cancer to the list of curable diseases.

It is infrequent now that from topographical anatomy comes any suggestion for a fresh advance in surgery. But now and again a correct misrepresentation or reading of anatomical facts, a new point of view or hitherto unthought of relationship will lead to a change in surgical practice. You will at once think, in illustration, of the rapid creation of the surgery of the cecum and appendix, in part under the impetus of the general development of abdominal surgery, still more as the rational outcome of that corrected view of the anatomy of the parts with which we associate the name of Mr. Treves. A yet more striking instance of a change in procedure, abrupt as a revolution, effected from the anatomical standpoint, is the revival in our time of the high operation for stone. Until the publication of Garson's careful observations on the position of the pelvic organs and on the effect produced by their distension on the suprapubic interval, lateral lithotomy continued to be practiced with a success which made it, as ovariotomy has since become, the boast of surgery. Cheselden, notwithstanding his eighty five per cent of recoveries, had abandoned the high operation for the still greater success of his method of lateral lithotomy; and Cheselden's operation, virtually unmodified, was that still practiced. The publication of Garson's observations and their introduction to the notice of surgeon's by Peterson and Sir H. Thompson, with the practical measures based upon them, led to a reversal of Cheselden's decision, and to the general displacement of lateral lithotomy by the high operation. The new facility in the performance of the latter afforded by the use of the rectal bag along with distension of the bladder—again, the bias given by the growing interest in abdominal surgery, and the tendency in the present day to prefer open operations in which the parts dealt with lie well exposed to both hand and eye—all these contributed to the rapid adoption of the change. Perhaps fashion, also, is not without influence in surgical matters; and it would be interesting as well as helpful, after fifteen years' experience of the revival, to learn from figures gathered in a sufficiently wide area whether the old standard of success has been maintained.

Canons in Surgery.

In thus dealing with the evolution of surgical principles and in tracing them, as I have so far done, to the three trunk roots of anatomy, physiology, and pathology, I am not unmindful that surgery as a practical art must needs get sap for its nourishment from whencesoever it can be drawn. It has, therefore, rootlets into every branch of physical science; and there is, moreover, a large body of surgical principles which spring almost purely from observation and experience—not experiment, so far as English surgery is concerned, for that source of knowledge has been so hedged round with obstacles as to be nearly valueless. In this sense of principles derived from experience we use the word as implying not a fundamental fact in science on which action is based, but a rule of action adopted because it has been found, or thought to be, the best, and stamped with the authority of general acceptance. Necessarily such rules are apt to vary, but for the most part, as time goes on, they find their justification in some subsequently proved fact in diagnosis or pathology. The phrase "canons in surgery", used long ago by John Bell and revived a few years ago by Mr. Hutchinson, very aptly covers these rules of experience. Their character and mode of formation will be best shown by an example. The question of amputation in senile and diabetic gangrene of the foot seems to be in course of settlement in favor of operation. The condition is almost certainly fatal, and is fatal often after a period of lingering and intense suffering As a measure for its relief or for the saving of life, amputation has almost uniformly failed when it has been done in the lower part of the leg. The gangrene seizes upon the flaps, and if the limb be reamputated higher up the stump is again attacked. But it has been found that if the leg be taken off in the first instance above the knee a fair proportion of cases recover. About one half, according to the most recently collected figures, have been successful, and in a condition so hopeless and usually so painful, such a result is better than the certain issue of non-interference. Let me enforce the point, and at the same time refer to an interesting paihological fact which, in some instances at least, provides its explanation by quoting a case. A man, aged 56, had spreading gangrene of the toes, with severe and constant suffering. The circulation of the whole foot was very imperfect. No pulsation of the posterior tibial was to be felt, but that of the popliteal was distinct. The leg was amputated immediately below the knee, and recovery was marred by slight sloughing of the flap edges and a good deal of pain in the stump. In the end the case did well. The artery, which had been severed high in the popliteal space, presented an interesting condition. Due to chronic ar-

teritis, and not atheroma, there was thickening of the coats to the extent of complete occlusion of the pos terior tibial behind the malleolus. A thrombus nearly filled the artery in the calf, and above the bifurcation of the popliteal there was a great narrowing of the vessel. This narrowing close to the bifurcation has been noted in similar cases. It is an old observation that tendency to degeneration in consequence of strain is greatest close to an arterial bifurcation; and the frequent occurrence of serious narrowing at the point referred to explains in a proportion of cases the ill success of amputations through the leg for gangrene. The happily limited sloughing and protracted recovory of my patient teach—as the consequences of breach of rule ought to do—the advantages of obedience; and I leave the case as testimony, so far as it goes, in favor of the establishment of a surgical canon, to this effect: In spreading gangrene of the foot, amputate through the thigh.

An old and familiar surgical canon formulated by our predecessors as the result of experience, enjoined on the surgeon the duty of operating, "when in doubt", in all cases of hernia. We greatly need the guidance of some equally definite rule in cases of internal obstruction. Upon the question of operation surgeons are, if not divided into two parties, at least biassed in contrary directions. Some would operate in all cases of complete obstruction so soon as they have the opportunity; others would try others measures, see what Nature will do, and operate as a last resource. And strong arguments are to be found on either side. The surgeon who would always operate, and had always an early opportunity of doing so, would unquestionably achieve the best results possible, although he would operate on a certain proportion of cases that could spon taneously recover. But unfortunately no one is brought in contact with even the majority of his cases in an early stage. And hence arises the force of the contrary arguments. The circumstances which militate against the success of operation for internal obstruction in the fully established or later stages of the complaint are twofold. In the first place, in nearly all cases, secondary changes speedily ensue, which hinder the search for the obstructing cause, aud which may nullify attempts at its removal. And in the second place the patient often passes, it may be at an early period, into a condition mainly due to poisoned blood in which he trembles on the brink of collapse, and in which operation is badly borne. Add to these the fact that a not inconsiderable number of cases, even when there is stercoraceous vomiting, do recover, whose chance of recovery would disappear under the shock of an operation; and we have what I think is a fair statement of the reasoning against operating in all cases. Where are we to look for guidance? Mainly, the question must be settled by experience; it is a case to which the maxim "Solvitur ambulando" applies; and I think experience will aid by bringing to us the ability better to discriminate between the different causes producing obstruction, and to appreciate the prognosis to be attached to each. In a syllabus of intestinal surgery recently published, (Dr. Byron Robson in May No. of *Annals of Surgery*) a list of eleven different causes of intestinal obstruction is tabulated. When we have learned more accurately to distinguish between these at the bedside, we shall be much nearer to the acknowledgment of a surgical canon or rule to guide our interference.

I shall trespass on your attention with one more surgical canon, but it is one whose propriety is so obvious —nay, whose observance is so imperative—that it ought to need no enforcing. The magnitude of many modern operations carrying surgical interference to the verge of what the human body can sustain, makes it more and more incumbent on the surgeon to avoid, or as far as possible to minimize, shock. And yet I doubt if this important duty receives generally the systematic attention it deserves. We do not know the exact pathology of the condition; probably several different conditions are included under the name. But we are very familiar with its symptoms. We know that the patient becomes cold, that the heart's action is depressed, and that all the nervous functions are lowered. We know also that it is induced or aggravated by prolonged operation, by chilling of the surface, by hemorrhage, whether this take place rapidly or by continuous oozing in small quantity for a long time. I should like to add also that the giving of chloroform on successive days lowers the patient's resisting power. All this supplies hints enough for its prevention and treatment. Something can be done in anticipation of the operation in the way of propping both the physical and moral courage of the patient. Much can be done after the operation in rallying from the condition; and I have believed that a very small, stimulating, hypodermic dose of morphine has proved then of greater use than the same measure employed as a prophylactic. Transfusion with normal saline has so wonderful a power of rallying from shock, though so far as my experience goes its good effect has been disappointingly transitory, that its use will now not be neglected. But most is in our power in the way of prevention by guarding our patients against all those causes which produce shock or aggravate it; and therefore the surgical canon which in this matter claims not formal acknowledgment but systematic observance is: Avoid or as far as possible minimize shock.

But time, and the fear lest I should exhaust your courteyus patience, warn me to conclude. In the survey I have given I have had before me the wish to illustrate the growth of surgical principles, and the necessary linking between these and practice. In fearing that much that I have brought before you must have seemed elementary and commonplace, I am conscious that the fault has lain not in the choice but in the handling of my subject. No inquiry into the manner in which knowledge is acquired, or is turned to practical account ought to be without interest or helpfulness. And, for the most part, we are so engrossed with practical details

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knowing how much in surgery depends on these, that we have little time and thought to spare for scientific principles. We may, therefore, profitably remind ourselves that our art is better just in proportion as our science is broader; that for true progress the two must go forward abreast; and that, though great things have been accomplished in our time, much more remains to be done.

A New Method for the Radical Cure of Varicose Veins.—Recognizing the deficiencies of these modes of treatment (Laplace, *Jour. Am. Med. Ass*), we proceeded to treat the condition in a manner that would remedy it at once. The two great channels that drain the superficial venous circulation of the leg are the internal or long saphena and external or short saphena veins. These and their tributaries are the vessels affected in the varicose condition. The lack of support, or any other cause act simultaneously upon every branch of the vein. The long saphena vein commences in a minute plexus on the dorsum of the foot; it ascends in front of the inner ankle and inner side of the leg, behind the inner margin of the tibia. It drains all the anterior surface of the leg and the whole circumference of the thigh.

The external or short saphenous vein drains the posterior portion of the leg and empties into the popliteal vein between the two heads of the gastrocnemius muscle. This being the case it occurred to me that if obliteration of the varicose veins was the essential factor in the cure, it might be possible to obliterate all the surface venous circulation by ligating the long saphenous vein at the saphenous opening and the short saphenous vein between the heads of the gastrocnemius. Blood stasis must necessarily follow and a certain amount of edema. Elevation of the limb, and gentle compression with raw cotton and a flannel bandage soon overcomes this. Rest in bed adds the final requirement to what seemed to me *a priori* the ideal mode of obtaining a wholesale obliteration of all the varicose veins of a limb, hence the cure.

The advantages claimed for this method therefore are, first, it deals with the cases of varicose veins at wholesale; second, the operation if aseptic, is harmless, easy, and with the help of cocaine, painless; third, it achieves that principle which we know underlies the cure of all aneurismal or varicose conditions, viz; an ultimate obliteration of the impaired blood vessel. This is reached by coagulation of blood and gradual absorption of the coagulum, while sufficient white blood corpuscles have exuded during the period of distension to subsequently build fibrous tissue which will contract upon the obliterated vein; fourth, until now we are not aware of any relapse; fifth, a cure seems apparent in from two to three weeks.

NOTES AND ITEMS

The New Welsh University and Vivisection.—In the Charter of the Welsh University, (*Med. Times and Hosp. Gaz*) which is now before the English Parliament, there is a clause expressly forbidding the practice of vivisection in the School of Medicine which it is proposed, under the Charter, to establish at Cardiff. This prohibition was demanded by the Marquis of Bute as an essential condition of his helping to endow the institution. The Marquis is one of the Vice Presidents of the Anti-Vivisection Society.

Brown-Sequards's Elixir.—As this eminent physiologist is reasserting with great confidences the therapeutical efficacy of testicular and other glandular preparations, it may be interseting to cite negative evidence on the subject. *Lo Sperimentale* (of Florence) quotes from the *Riforma Medica* the results of a long series of experiments with the "liquido testicolare di Brown-Sequard," undertaken by S. Massalongo. He concludes that the testicular liquid of young and healthy mammals, injected hypodermically, has not the slightest effect upon the human organism; that the trifling and transitory modifications of circulation, respiration, temperature, and muscular power are explicable by the excitement and tension of the subject's mind; that any rare and transient improvement observed n the treatment of various organic diseases by this method was due to suggestion and the influence of imagination, to which causes alone is to be attributed the cure of some cases of hysteria and neurasthenia.—Dublin *Journ. of Med. Science.*

The New Nerve Restorative—Kola.—Some interesting information respecting the Kola plant has recently been published in an official report by Mr C. F. Elliott on the botany of Sierra Leone (*Med. Times and Hosp. Gaz.*). The tree, *Kola acuminata*, Mr. Elliott says, grows freely everywhere, and is found from the sea level to fully 3,000 feet. It appears to thrive wherever planted, and is well able to hold its own in the original native bush. It begins to bear in seven years, and is in full bearing after eight or ten years. At present the nuts are chiefly used by the natives, but so much has been done of late years to bring their valuable properties before the public that it may be safely said that the demand in Europe is sure to increase. The following are some of its properties: A nut, or even half a nut, will enable a man to go without food and support great fatigue for twenty-four hours or more. It is an excellent nerve tonic, and is especially good for keeping the brain clear and active at night. It, however, prevents sleep almost too thoroughly, and should not be taken less than four hours before bed. A property not understood is that of rapidly clearing foul water and improving beer. It is also said to remove immediately and thoroughly the unsteadiness and stupidity due to drunkenness. Mr. Thomas Christy, of

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Lime Street, E. C., has been very active in introduciug the Kola fruit to the notice of medical men in this country.

The President's Health.—It seems a confirmed weakness of the secular press in dealing with the affairs of men prominent in public life, to announce them more or less incapacitated by illness—the habit of political opponents; or else suffering from an excess of good health —the habit of political supporters. So general is this cus tom of exaggeration that the public put little faith in reports on the subject. There is always a disposition on the part of friends to deny all rumors of sickness. This was notably so when Garfield was dying; also when Sheridan and Blaine were upon their death beds. The more prominent the man, the more he suffers—from press reports, so that when actually sick or threatened by impending death, the true knowledge of the matter comes like a shock to the public.

That it is fortunate the public is not generally aware of the truth is well illustrated in the present case of President Cleveland. The existing financial stringency, the commercial interests of the country and other questions of vital importance to the nation, have brought about a condition of affairs that alarm for the chief magistrate's health would make "confusion worse confounded,"

Sensational reports of President Cleveland's physical condition, together with some actions apparently inexplicable, have of late filled the secular press. The reports of ill health have been regarded in the same light as the reports of cowardice in meeting political emergencies. But it now seems that there was some foundation for the former reports, as it is asserted on what appears to be good authority, that not only was the President's health impaired seriously, but that he has submitted to an operation for immediate relief; and in hope of the ultimate cure of a serious condition.

It is stated that Mr. Cleveland has been suffering for some time from a morbid growth "in the bones of the left upper jaw and nose," the nature of which could only be determined by microscopical examination; the inference being that the growth was malignant. The dis eased portion of the bone was thoroughly removed with out an external incision and the immediate recovery was complete. The operation was performed under nitrous oxide anesthesia, while the Precident was on board of a friend's yacht on the first of July last. None but the most intimate friends of the President were cognizant of his condition or of the performance of the operation at the time.

President Cleveland's wonderful self-control and endurance, and his intense devotion to the duties of his position have excited the admiration and respect of all, even his political opponents. The hope that the growth will prove benign, or if not, that the operation was entirely radical will be universal. Doubtless the profession will soon be aware of the actual nature of the disease.—*Med. and Surg. Rep.*

Epilepsy and Chorea.

Dios Chemical Co., St. Louis. Mo.—I find your Neurosine a valuable nerve tonic. I also find it the best remedy for epilepsy I have ever tried, and in chorea, I look upon it as the best.

A. F. WATKINS, M.D., Potosi, Mo.

Elixir Nutrans.

Elixir Nutrans, although known to the profession but a short time, is always used again wherever tried. This tonic and stimulant has been successfully used by our most prominent physicians. In depression and melancholy its worth can not be over-estimated. Send to Allaire, Woodward & Company, Peoria, Ill., for literature on the subject from prominent physicians.

Dysmenorrhea, Surprising Results!!

Dios Chemical Co., St. Louis, Mo.—The Dioviburnia you sent me has proved itself a friend indeed. I used it in a case of dysmenorrhea with surprising results. I recommend its trial to all who are willing to trust to its efficacy, knowing well that it will give satisfaction.

P. W. PEARSALL, M.D.,
Grand Lodge, Mich.

Compound Talcum Baby Powder.

Dr. Julius Fehr's Compound Talcum Baby Powder, the "Hygienic Dermal Powder" for infants and adults is advertised in this journal. It is a superior article and we recommend it especially for infants, but its antiseptic, antizymotic, aud disinfectant properties indicate its usefulness in all affections of the skin in adults as well as children. It is also used as a general sprinkling powder.

Sennine in Eczema and Venereal Ulcers.

EUREKA SPRINGS, ARK., Oct. 9, 1893.
Dios Chemical Co., St. Louis, Mo.—

GENTLEMEN—The sample of Sennine you sent me came safely to hand, and I happened to have some cases that visited my office daily for treatment. In two cases of eczema covering the inner side of thigh I applied the Sennine just as I received it from you, that is, full strength, dry, and I am happy to say it acted like a charm in both cases. Again I applied Sennine to venereal ulcer and must say that it did all any one could ask. I look upon Sennine as *the* antiseptic of all others and shall continue its use in my practice.

W. R. HARDESTY. M.D.

Febricide Pills in Malarial Troubles.

In malarial troubles we have a multitude of depressing symptoms which keep the system in a low condition. We find many similar symptoms in neurasthenia. Are not many cases of malaria (so-called) really caused by a deficient action of nerve force from the cerebre-spinal system? If this is the case then we require a stimulating tonic to elevate these forces during this period of inaction, and by the elevation of these forces we restore the functions of life to a normal condition.

Neuralgia caused by nervous depression must be corrected on a basis of common sense. If we administer anodynes the effect is only temporary. If the trouble is due to loss of nerve force we must raise that force to accomplish permanent relief. This is a practical manner of considering disease, and its scientific treatment. In the treatment of malarial troubles, neurasthenia and neuralgia, the profession will find Febricide Pills worthy of their consideration, as it is a combination of remedies which merits their confidence and which has proved most valuable in my experience with it.

ELIAS WILDMAN, M.D., D.D.S., Ph.G.,
Jenkintown, Pa.

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ORIGINAL ARTICLES

Mastitis—Its Treatment.

BY M. R. MITCHELL M.D.,

Professor of Obstetrics, Kansas Medical College.

Read before the Section of Gynecology and Obstetrics, at a Meeting of the Kansas State Medical Society, Topeka, May 12, 1893.

The sorrows of maternity do not end with bringing forth children.

When the babe is first wrapped in swaddling clothes, the responsibilities of the obstetrician are but fairly begun.

By derangements of the breasts great suffering is often experienced, the mothers convalescence much complicated, and the child's welfare sorely tried. One of the most common of these derangements is suppurative mastitis.

The general indications are swelling, hardness of some part, or, it may be of the whole of the mammary gland, with tenderness, pain, lymphangitis evidenced by the appearance of red lines on the surface of the gland and in the axillary region, with more or less rise of temperature and pulse, and sometimes pronounced rigors.

It is easily diagnosed from tuberculosis of the mammary gland by the indications of acute inflammation.

The disease presents itself in varied degrees of intensity. From the tender lump to the multilocular abscess which occupies the whole of the gland filled with pus and broken down connective tissue, incurring weeks or months of intense suffering and exhaustion, with permanent impairment of function of the gland.

For clinical study of the pathology and treatment experience perhaps justifies the usually classified varieties.

Thus, first, superficial or subareolar, shown by soreness, redness, swelling at a point on the surface near the nipple, which soon suppurates.

Second, It is submammary, deeply seated in the connective tissue between the gland and the pectoral muscles. The symptoms are general swelling and prominence of gland, great pain, high temperature, no redness and often attended with chill.

The third variety, the most common form, is parenchymatous, located in the body of the breast, commonly involving both the glandular and the interglandular connective tissue. Its special symptoms are circumscribed prominence and redness with the other usual indications of local inflammation and suppuration.

Mastitis may occur in any case, and at any time during lactation, or even non-lactation, but it is most apt to occur in the primipara, and in the first three or four weeks of lactation.

In the primipara these rudimentary organs are at first severely exercised. Imperfect development or depression of the nipples intensify the effort to secure lactation, resulting in the wounding or removal of the epithelium. This mechanical irritation, with a want of cleanliness, produce excoriated or fissured conditions of the nipple which are the most frequent predisposing causes of the disease.

The opinion has been quite prevalent that abscess of the breast may follow as a direct and necessary consequence of engorgement, caused by imperfect flow of milk, by drafts of cold air, blows and bruises. But this view is hardly consistent with the accepted theory of parasitic causation of suppuration. Such conditions can reasonably be regarded as only producing a susceptibility to abscess, the ultimate consequence of the entrance of microbes through the wounded epithelium of the nipple, or it may be rarely auto-genetic, from the general septic character of the blood of the mother.

In calling attention to the treatment I wish to emphasize the responsibility of the obstetrician as to the preventive attention.

The primary care of the breasts should not be left to the patient and nurse, but should have at least the personal direction of the obstetrician himself.

Necessary precautions to prevent excoriation of the nipples should be minutely directed, and particularly as to thorough cleanliness and protection of the nipples from irritation.

A good rule from the first, after each nursing, is to cleanse the nipple with a saturated solution of boracic acid, also the child's mouth with the same solution.

Endeavor to guard against over-distension and congestion of the breast by suitable compression and support. If excoriation or cracks of the nipples appear, the above cleansing should be kept up, also boracic acid

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ointment, or the Co. tr. benzoin may be applied with great benefit, and the breasts kept carefully covered with dry absorbent cotton.

Too frequent or prolonged nursing must be avoided. If the fissures become deep, nursing must be suspended for a time.

In case of a circular fissure at the base of the nipple a few applications of collodion with a little cotton may render such protection as will secure healing of the fissure.

Great benefit is sometimes rendered by touching these fissures with the pointed stick of nitrate of silver. In many of these cases of excoriation and fissures of the nipple, a suitable shield may often be effectually used, the process of nursing continued with little pain and the restoration of injured nipple attained much more readily.

But if nursing is attended with considerable pain, and there appears any indication of threatened inflam mation and suppuration of the breast, nursing should certainly be suspended, strict antiseptic care pursued, engorgement relieved by compression and support of breast bandage, a skillful and intelligent application of massage with some emollient, an occasional bathing of the gland with solution of acetate of lead and opium, repeated doses of a saline laxative, which by its derivative effect assists in draining the lymphatic channels of the mother, should be given.

When suppuration becomes inevitable or has already set in, the question of lactation is an important one. If there is a reasonable hope of an early termination of the disease without serious involvement of the gland and a safe preservation of the function it should be done. When the abscess is superficial, or involves but a small portion of the gland we may expect to suspend the babe's nursing only temporarily, but in all aggravated forms we should promptly decide to suspend it entirely.

Whenever pus is formed it should be immediately evacuated by a free opening.

In the submammary or parenchymatous varieties, where the pus is located deep in the organ the incision should be made only through the skin and subcutaneous tissue, then a grooved director should be forced into the pus cavity, along which may be passed a pair of scissors or spreadors, by which the opening may be enlarged so as to introduce the finger to break down the diseased tissues and open up additional cavities. Where the pus cavities are deeply seated, there should be free drainage and washing out with boiled water. In old cases when the pus has been decomposed, some antiseptic wash is indicated followed by an antiseptic gauze dressing. As a rule in these operations an anesthetic should be given. In all cases poulticing should be rigidly discarded, but absorbent cotton should be used as a dressing. In some instances hot fomentations may be temporarily applied where there is severe pain.

The general condition of the patient in many cases demands attention, such as support and rest.

The chief points to be observed then are prompt prophylactic attention, especially to the nipple. If abscess is imminent, or does already exist, take the baby from the breast, secure rest to the organ, immediately evacuate the pus.

Thorough cleanliness and antisepsis all the way through should be rigidly employed.

If the whole technique of attention embracing the above as the principal points, are strictly carried out, under the personal supervision of the obstetrician, childbearing will be deprived of at least some of its horrors.

Alumnol in Rhinolaryngology.—For the investigation of the value of the new soluble preparation of alumnol, designated by the above name, in affections of the upper respiratory tract, we are indebted to Dr. Albert Spengler, Assistant Physician to the Heidelberg Out-Patient Clinic for pharyngeal, laryngeal and nasal diseases. The cases (twenty in number) were chiefly various forms of acute and chronic inflammation of the mucous membrane and the remedy used was in one-half, one, two, five and ten per cent aqueous solution. The duration of the treatment in acute cases, varied from a few days to two weeks, and in chronic cases, from one to two months. In two acute cases of pharyngitis, cure was effected in from four to eight days, and in two of the chronic form, in two to four weeks, by painting with five per cent alumnol solution, in four cases of chronic pharyngitis, decided objective and subjective improvement was obtained. Such troublesome symptoms as feelings of dryness, stinging pain sometimes shooting to the ear, slight loss of voice, disappeared, while at the same time the mucous membrane assumed a more normal appearance, and the volume of the secretion was reduced.

After daily clearing out the pharynx with five per cent alumnol solution for only two or three weeks, the mucous membrane lost its dull dryness in pharyngitis sicca, became moister, and the secretion changed from thick tenaceous blackish brown masses, to a thin yellowish liquid of small volume. The five per ceht solution was eventually exclusively used, as weaker solutions proved inactive, and stronger were very irritating.

In three cases of slight laryngitis acuta, cure was effected in four to eight days after treatment with twenty per cent alumnol solution, but in four cases of laryngitis acuta gravis, daily paintings with six per cent alumnol solution for a few days only, brought about a subjective and objective improvement. In one instance a very severe acute laryngitis with complete aphonia and manifest epithelial opacity on both vocal cords, improved with extraordinary rapidity on a daily application of five per cent alumnol solution, so that within a week approximate cure was attained.

The author in summing up points out that alumnol can do good service in various forms of laryngitis, especially pharyngitis sicca. Though not superior to a one or two per cent chlorides of zinc solution in therapeutical effectiveness, it appears to be less unpleasant to the patient.

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EDITORIALS

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

All letters containing business communications or referring to the publication, subscription, or advertising department of this REVIEW, should be addressed to 914 Locust Street, St. Louis.

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Department Editors of the "Review."

We take occasion to draw attention to the fact that we have secured Dr. F. J. Lutz, Dr. W. B. Dorsett and Dr. E. C. Runge as Department Editors in General Surgery, Gynecology and Obstetrics, and General Medicine. This increase in the editorial management is quite an acquisition for the REVIEW, and will no doubt be welcomed by our readers. It will be our constant aim to furnish our patrons with the best possible information in the various branches of medicine, and hope that our friends will continue to help us in our effort to improve the usefulness of the REVIEW.

Influenza.

There is good reason to believe that the bacillus discovered by Pfeiffer and Canon is the cause of influenza. The bacilli are very small having, according to Sternberg, about the same diameter as the bacillus of mouse septicemia, but are only half as long. After they are stained they appear at first sight as diplococci, because the two ends of the bacilli are stained most intensely, but upon closer inspection a slightly stained middle piece will be noticed. According to Canon the bacilli occur in the blood of every influenza patient and, while Pfeiffer and Beck claim that it occurs in this fluid only in exceptional cases and that the bronchial tubes are the exclusive place of infection, Canon clings to his previously expressed view that the blood may be primarily infected. In *Virchow's Archives*, Volume 131, part 3, in an article: *Die Influenzabacillen im lebenden Blute*, he quotes a case in which he found influenza-bacilli in the blood of a patient who neither coughed nor expectorated anything during the whole attack, but, on the other hand, no bacilli were found in the blood of a few cases of influenza-pneumonia. Out of thirty-one cases twenty-two gave positive results with regard to the examination of the blood for the characteristic influenza-bacilli, in the other nine the result was negative, but the cause of the latter result could be traced to either imperfect preparations or to the fact that the patients had passed the stage of fever, or were suffering only from some after-effects of influenza. In all positive cases the blood had been obtained at a time of the real attack of the disease. Based upon bacteriological observations the possibilities of infection by influenza are thus formulated by Canon:

1. The influenza-bacilli enter the air passages and find a favorable soil for development; thence they enter the blood-current but here development takes place only in a small degree. In this instance the catarrhal form of the disease is principally developed.

2. The influenza-bacilli develop in the air passages only to a small extent, but, finding a favorable soil in the blood, develop in large numbers. Then the clinical symptoms of a general infection are observed and the nervous form of the disease takes a place in the foreground, the catarrhal symptoms playing an inferior role or being entirely absent.

3. A conjoined intense infection of both, the bronchial tubes and the blood: The severe form with intense catarrhal and general symptoms is the result.

In our opinion these deductions appear exceedingly plausible and if the observations made by Canon are verified by other bacteriologists we would accept this explanation of the symptoms in the various forms of this disease as the correct one.

Another interesting observation has been made in connection with this subject, namely, Canon has found objects in the blood of influenza patients which resemble those of the influenza-bacilli, but are but slightly stained. It is very probable that these are influenza-bacilli in a state of disintegration and since they have never been found in leucocytes this observation furnishes an additional argument for the bactericidal properties of blood-serum and that phagocytosis is not the only means which the animal organism possesses to rid itself of an invasion of bacteria.

The Etiology and Therapeutics of Alcoholic Inebriety.

Lewis D. Mason, M.D., writes in the Brooklyn *Medical Journal*: The "alcohol habit," "drink craze," "thirst

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for alcoholic liquors," oinomania, dipsomania, comprehended under the general title Inebriety, and for which the latter is a synonym, is oftentimes, if not always, the symptom or outward and prominent manifestation of diseased conditions, which antedate the alcohol craving, and are its predisposing and exciting causes not only; but complications—which retard, and sometimes even prevent a cure.

In the popular, and too often in the professional mind, alcohol is regarded as the cause and the root of the whole evil of inebriety. We desire to assert that inebriety is frequently dependent upon causes with which alcohol has nothing to do. There is a neurotic craving—it may be congenital, it may be developed as the result of disease or accident. This craving demands the various forms of narcotic stimulants, those that first excite, then produce narcosis more or less complete. Alcohol fulfils this condition, is easily accessible, reasonably inexpensive, and is the one drug that meets a morbid craving that seems to be almost universal. But what about the origin of this craving, this abnormal desire for alcohol or other drugs.

We do not fail to recognize the deteriorating effects of alcohol manifested principally, at least, more pronouncedly upon the nervous system as seen in the various forms of insanity, and the various neuroses, neuritis, epilepsy, alcoholic paralysis. We also note the degenerative effects of alcohol on lung, liver, kidney or other organs and tissues of the body; or as a special poison in the same sense that lead, arsenic and tobacco produce their effects.

But beyond and back of the direct, deleterious effects of alcohol, functional or organic, upon the nerve system, or its alterative effect on tissue, or its direct poisonous effects, as far as alcohol may be regarded as a factor in the production of inebriety, we believe that we may practically exclude it from consideration as a prime factor, certainly the most important factor in the etiology of inebriety.

We believe that the great majority of inebriates become so from necessity, not from choice, that there is a "vis a tergo" of heredity, environment and disease, that produces physical degeneracy and pushes them over and plunges them into inebriety.

With some of the various predisposing and exciting causes of inebriety we are reasonably familiar; these by their direct or reflex influence upon the cerebro-spinal axis produce or lead to habits of involuntary drunkenness or inebriety. The patient with fever craves and may drink water freely, excessively and injuriously. The diabetic is an aqua-maniac in a certain sense, but in neither case do we recognize the aqua mania or water craving as the disease, but rather as proceeding from certain abnormal conditions which we readily recognize. So the liquor thirst is the result of morbid conditions that produce an abnormal desire, which alcohol seems, temporarily at least, to satisfy.

Whether there are any definite lesions of the nervous system which produce dipsomania as other well-defined lesions of the nervous system have produced definite well known symptoms, we are not prepared to say, but classify dipsomania with erotomania, kleptomania, pyromania, or other forms of periodical and impulsive insanity, which are marked by nerve storms or crises, which like tidal waves come suddenly, overwhelm the individual and plunge him into characteristic forms of dissipation, violence or crime.

The excessive use of alcohol, while it is oftentimes the cause of various diseases of the nervous system, and also a frequent cause of insanity, is also the precursor or initiatory symptom of certain diseases of the nervous system and also of insanity.

The paretic will crave and use alcohol in the earlier stages of his malady. The victim of nervous syphilis is addicted to it, more especially in the later stages when the nervous system becomes involved; about one in six of the several thousand inebriates that have passed under our observation at the Fort Hamilton Institution were so affected.

I have reason to believe that many did not use alcohol in excess until the nervous symptoms of syphilis were developed. Any depressing, exhausting, or painful disease may produce the alcoholic craving, alcohol being sought for its stimulating properties. The neurasthenic craves alcohol, and it temporarily relieves the "nerve exhaustion" so common amongst the great army of neurotics. Alcohol, moreover, is second only to opium, ether, or chloroform as an anesthetic, indeed, has been used as a substitute for the latter. Hence, persons find experimentally, that alcohol relieves pain, and its use is carried to a harmful extent, its deleterious effects produced and inebriety established. Indeed, there is an analogy here between the opium and the alcohol habit. While the former almost invariably has its starting point as a pain relieving agent, the latter has also, not infrequently, the relieving of pain as its begiening.

It is possible that a healthy individual with good personal and family history, may use alcohol sociably or as a matter of custom, until the habit becomes firmly established. The alcohol breaks down the constitution, invades and degenerates the nervous system, and thus developes inebriety, because the alcoholic degenerations, or even functional disturbances of the nervous system are the very conditions under which inebriety is established. We say this is possible, but we assert again that behind the large majority of inebriates will be found a defective family or personal history, not only complicating but causing the inebriety; retarding, oftentimes preventing a cure.

It can be thus seen that inebriety is but a symptom —a flag of distress hung out by the nervous system. As some one has aptly said, "neuralgia is the cry of the diseased nerve," so the "drink craze" is the cry of the neurasthenic for a stimulant, of the pain tortured nerve for an anesthetic, of the victim of insomnia for a hypnotic. It is but reasonable to infer then that the therapeutics of inebriety must be varied as the causes that

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underlie and call it forth. Not any patient that applies for relief to the physician needs a more careful examination than does the inebriate. You may rest assured that there is some underlying cause, probably several, that must be removed if we would restore the inebriate to his former habits of sobriety. If he is found suffering from the later manifestations of syphilis he will need special treatment for this condition, especially if the nervous system is involved; a painful stricture of the urethra may require division. Chronic malarial poisoning with its complicating disorder of stomach, liver and spleen, will demand special treatment. In a case on record the irritation of a tape worm produced a tendency to the excessive use of alcohol, which tendency passed away when the worm was expelled.

In a word, the large majority of inebriates are diseased persons and that primarily and antecedent to their inebriety, which is appended to and aggravates their diseased condition.

Special diseases therefore require special treatment, irrespective of the inebriety, if we wonld cure the inebriate. In this connection we may ask are there any drugs that we can substitute for alcohol. Opium and the salts of morphia will do so in a marked degree, although cocaine, chloral and the bromides have been so used.

The use of opium or morphia is not uncommon among inebriates who desire to "leave off alcohol." The inebriate, as a rule, is a congenital neurotic. From birth almost, he reaches out for some drug that will gratify or meet his neurotic craving. He will "ring the changes" on all drugs that effect the nervous system; he will try all things (drugs) and hold fast to that which is bad. The alcohol and the opium habit to the inebriate are convertile habits, and the inebriate, like a pendulum, will swing from alcohol to opium; not infrequently the two habits are combined, as in the form of tinct. opii., constituting a mixed habit, in which the effects of both alcohol and opium have to be considered. Occasionally a case is presented in which morphia is used hypodermically, and the alcohol used in the usual manner. In cases where opium addiction is associated with the habitual use of alcohol, the opium habit is of paramount importance and the alcohol assumes a secondary place. The fact that opium can substitute alcohol is the keynote to many vaunted secret cures, in the so-called "narcotic treatment" for alcohol. It simply substitutes one habit for another and as long as the victim is taking the so-called remedy he is reasonably comfortable. But I admit if the "narcotic treatment" was carefully practised, in judicious hands it might, in conjunction with such other remedical measures as would best eradicate the primal causes of the inebriety, prove useful if not curative in cases of inebriety.

Are there any drugs that are specifically beneficial for the treatment of inebriety as such? We would state that drugs that act directly as a stimulant to the nervous system are of value. Strychnia is a type of this class of drugs and one of the best of its class. Luton, of Rheims, Belgium, was the first to point out its value in alcoholism. Then the Russians used it largely and it was known as the "Russian treatment," and finally, the Americans adopted its use in such cases.

Strychnia has proved serviceable as both abortive and curative in acute alcoholic delirium, as well as useful in the more chronic forms of alcoholism. It seems to be tolerated in such cases—in cases of alcoholic poisoning under normal conditions, we have no record of the value of strychnia as an antidote; interesting experiments might be made on the lower animals with a view of determining this point. Strychnia is an excellent cardiac tonic, and one of the best respiratory stimulants, and might be used in general medicine in cases in which alcohol is oftentimes prescribed.

Oxide of zinc, during the past twenty years, has been used with advantage in cases of chronic alcoholic intoxication. This drug was largely brought to the notice of the profession by Dr. W Marcet, of London, who had an extensive hospital and dispensary practice, especially in diseases of the nervous system; and as he found zinc of value in various chronic disorders of the nervous system, he used it also in cases of chronic alcoholism. His observations, published in a small work entitled "Chronic Alcoholic Intoxication," are an extremely valuable addition to the literature of alcoholism.

Quinine has been used more particularly in the later or convalescent period of the treatment of alcoholism. The so called "Red Cinchona Cure" for a time interested the public. Rational medicine does not recognize any special drug or specific remedy as a universal cure in inebriety, nor does clinical experience form any basis for such a claim. From the very nature of the case, such a remedy would be impossible. The etiology of inebriety is dependent on such a variety of causes, and its environments and complications so numerous, that any one remedy could not fulfil all, or even meet the more important of these conditions. However valuable drugs may be to meet certain indications in the various conditions incident to inebriety, we believe that so far as the curative treatment of inebriety is concerned, drugs must assume a secondary place valuable as they may be in their respective spheres.

In the treatment of the alcoholic habit we place first: Restraint, and seclusion in a special asylum for a definite period, and total abstinence during this period. In a few words, concisely expressed, this statement includes the plan now adopted by the leading asylums of this country and of Europe for the recovery of the inebriate. It involves restraint (legal if need be), seclusion, a special institution, in which all the latest and best methods of dealing with the inebriate are procurable, a sufficient period in which to apply these measures and we need hardly add, a long period of total abstinence from all alcoholic liquors. We need hardly add that diet, rest, recreation, hygienic surroundings and the exhibition of appropriate drugs are all included in the above plan.

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The causes of degeneration being removed, the factors

of regeneration being brought into action, new formation of nerve, muscle and tissue must supplant degenerated tissue, if happily organic disease has not resulted in irreparable injury.

We have hinted at an hysterical element in the history of inebriety. The inebriate, whatever may be his condition, is largely influenced by his surroundings, hence, as almost in no other disease, must we recognize the value of psycho-therapeutical agencies hitherto if not altogether, used by the charlatan, but recently recognized and practiced by leading neurologists, as of value in their specialty. In the light of such an hysterical element in the clinical history of inebriety, we can readily account for the apparent success of the so called temperance movements that sweep over communities periodically and effect many apparent cures, or rather, in the language of the day, reformations. Such an element will also explain why after such a tidal wave of excitement, relapses take place oftentimes in large numbers, and the period of excitement is followed by a period of reaction.

The occurrence of relapses is readily accounted for by the fact that the stimulus of the period of excitement buoys up the inebriate for the time being, during which strong mental emotion is a powerful factor. He is keyed up, as it were, for the time, and sustained by a moral stimulus. When this is withdrawn, reaction, followed by corresponding depression, sets in, and the old method of stimulation is again imperatively demanded and yielded to. Why some inebriates go through such a period of excitement and do not relapse, and why others do, can be accounted for by the fact that the former are in a reasonable degree of physical health, and are not burdened, dragged down and handicapped, either by disease that is non-alcoholic, or that is the result of alcoholic degeneration. The inebriates so affected are not influenced, or if at all, only temporarily, by the so-called "temperance revivals" that appear and disappear with almost stated regularity in large and small communities, and we must add do good, but only in the channel indicated. It is also, operating through this hysterical feature of inebriety, that charlatanism may effect a temporary, possibly a permanent success in a certain class of cases.

A physician observed to me that he had visited many asylums for the cure of the inebriate, and that when the medical superintendents were men of strong will power and personal magnetism, as he expressed it, more cures were effected than when the reverse was true.

When the inebriety is due largely to neurasthenia, or in cases where the hysterical element largely preponderates, we believe psycho-therapeutical agencies, or even those that appeal to purely mental conditions, will be of service, but they will not cure a cirrhosed liver, lung, or kidney, or remove the physical causes upon which the inebriety may depend. In addition to those measures that appeal to the higher moral nature, there ought to be combined such as meet with certain intelligent wants. To this end all reasonable amusements, entertainments, and especially such occupations as will interest the person and keep him busy, should be encouraged if not made compulsory. Incidently I may mention hypnotism as having been used especially by French physicians, with some benefit in cases of chronic alcoholism. I have no data to give and have not had any personal experience with it.

The therapeutics of inebriety is a new field as yet not fairly occupied, but we believe the only true road to successful treatment will be along the lines we have indicated. That is, a knowledge of the underlying causes and the use of such therapeutic agencies as will best remove these.

"Tolle Causam," the legend emblazoned on the standard of rational medicine, the watch-word of every true physician and surgeon, should guide the specialist and direct his methods in his endeavors to cure the inebriate.

Clinical Features of Myxedema.—Dr. Byrom Bramwell (Edinburgh *Med. Jour.*) says: The diagnosis in typical and fully developed cases of myxedema presents no difficulty. The clinical picture which these cases present is so striking that when once one has seen a case it is impossible to help recognizing it. It is only in the early stages and in imperfectly developed cases that a difficulty of diagnosis cant occur. In young persons, as I have already remarked, the pink blush on the cheeks, which is such an important diagnostic feature, may be entirely absent. In the early stages the swelling of the face, and the slowness of thought, speech, and movement being often much less striking, are apt to pass unnoticed. In the earlier stages, increased susceptibility to cold, a subnormal temperature, dryness of the skin, absence of sweating, fullness of the face, especially of the lower lip, a feeling of lassitude and debility, and repugnance to active exertion, whether of body or mind, are the chief features of diagnostic importance.

The prognosis of myxedema has entirely changed within the last few months. Before Dr. Murray introduced his method of subcutaneous injection of thyroid extract, the prognosis was extremely bad. In some cases, no doubt, a certain amount of improvement occurred under friction, warm baths, diaphoretics, and tonics; but the disease was rightly looked upon as incurable, for these measures were merely palliative. They did not, and from the natnre of the pathological change could not be expected to produce any real and substantial amelioration. Now, provided that there are no complications, and the patient is not too old, the prognosis is eminently hopeful. It may, I think, be safely stated that the symptoms of myxedema may be entirely removed in the course of two or three months by the introduction into the body of thyroid extract, either in the form of subcutaneous injection, or better, through the stomach by thyroid feeding.

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BOOK REVIEWS

A Hand-Book of Local Therapeutics. By Allen, Harte, Harlan and Van Harlingen. Edited by Harrison Allen, M.D. Octavo—500 pages. Price, $4.00. Philadelphia: P. Blakiston, Son & Co. St. Souis: J. H. Chambers ffi Co., 914 Locust Street.

The need for a book of this character has long been apparent for there has been no text available in which the local action of drugs was not subordinated to their general actions, while the average text-book omits alto gether mention of many agents that in the hands of a specialist become valuable aids to cure.

Diseases which require chiefly local treatment are those of the Respiratory Passages, Eye, Ear, and Skin, together with certain general surgical affections, including Diseases of Women; it is therefore to the great advantage of the book that each remedy has been thoroughly set forth by different authors who have had large practical experience in these various branches.

Each remedy has been taken up in alphabetical order, and, after a description of its pharmaceutical properties, is considered in reference to its physiological effect and value in local treatment.

The demands for thorough revision of local medicaments made by the advance of theories of asepsis, have been fully considered, and a succinct account has been presented of the source and properties of the very numerous new agents which affect tissues locally.

Some drugs have been excluded which have been highly praised; on the other hand great care has been taken not to endorse imperfectly attested novelties.

This Hand-Book embodies the results obtained by experienced teachers, and will prove a very valuable work to the general practitioner. Two carefully made indexes make it a book of ready reference.

Examination of the Blood for Influenza-Bacilli.—The blood is spread upon clean glass covers in the usual way. After the preparations are thoroughly dry they are placed in absolute alcohol for from five to ten minutes. (According to Sternberg five minutes; according to Cauon ten minutes). They are then transferred to the following staining solution: concentrated aqueous solution of methylene blue, forty grammes; one-half per cent solution of eosin (dissolved in seventy per cent alcohol), twenty grammes; distilled water, forty grammes. The cover glasses immersed in this staining solution are placed in an incubating oven at 37° C. for from three to six hours, after which they are washed with water, dried, and mounted in balsam. In successful preparations the red blood-corpuscles are stained red by the eosin, and the leucocytes blue. The bacillus is seen in these as a short rod, often resembling a diplococcus.

ABSTRACTS

Frequency of Sequestra in Tuberculosis of Large Joints; Teatment of Joint-Tuberculosis.—Riedel, of Jena, has written on the frequency of sequestra in tuberculosis of the large joints, with observations on the treatment of joint-tuberculosis. Tubercular foci in bones, when no sequestra are present, often heal spontaneously, but the presence of a sequestrum renders healing impossible, unless the sequestrum be removed; hence statistics throwing light on the frequency of sequestra are of the utmost importance. Riedel reports 314 cases of tuberculosis of the six large joints, in which the disease began in the capsule in 32 per cent and in the bones in 68 per cent; 67 per cent of the latter presented sequestra, and in 33 per cent sequestra were present Hence, out of 314 cases 45.55 per cent were devoid of sequestra. If the above 34 cases of tubercular foci near the large joints are added, the total number is raised 348 of which 48 per cent had sequestra. As regards individual joints, in 88 cases of coxitis, 70 per cent had sequestra; in 116 cases of tuberculosis of the knee-joint, 37 per cent, in 39 cases of tuberculosis of the ankle, 38 per cent, in 10 cases in which the shoulder-joint was affected, 50 per cent, in 48 cases of diseases of the elbow, 31 per cent, in 13 cases of disease of the wrist, 15 per cent.

The tubercular process began more frequently in the bone than in the capsule, as is markedly shown in the hip joint (84 per cent). An interesting point relates to the frequency with which the disease begins in the different bones of a given joint. In the hip, for instance, the author determined that in 66 cases with sequestra the primary focus was in the acetabulum in 70 per cent, in the head and neck in 20 per cent, and in the head and acetabulum in 6 per cent, leaving 4 per cent undetermined.

According to the foregoing figures, the best chances of recovery without operative treatment exist in tuberculosis of the elbo, followed by the knee, and then the ankle. The hip-joint, which is the most often treated by conservative methods, offers the least chance of success, so that very few cases are permanently cured by injections, etc. In spite of these statistics, however, the operative treatment of the other joints gives such good results that Riedel would advise its continuance.

The author perfers to operate through longitudinal incisions, especially where cavities are left. These incisions are tamponed and not sutured. Any cross-incisions which may be necessery are united by catgut. The resulting scars are just as good as if the incisions had been closed, and healing in the depths of the wound takes place with greater rapidity and certainty. He speaks strongly against the tuberculin treatment.

In the following statistics from Achen only those cases are designated as cured which were discharged without fistulæ. The total number was 137. Of these

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75 per cent were cured; in 13 per cent fistulæ remained; subsequent amputations were in 3½ per cent, and 8½ per cent died. In 49 resections of the hip-joint there resulted 62 per cent of cures. Owing to the resulting shortening, the author would be glad to discard resection of the hip; but seeing injections of iodoform are particularly useless in this joint, there remains nothing else. He has succeeded, however in several cases, in removing the capsule and leaving the head of the bones in place. This is best done by means of a transverse incision. After 40 years of age, and even earlier, exarticulation is recommended.

In 51 cases of resection of the knee with extirpation of the capsule, 88 per cent of cures resulted. As with the hip-joint, Riedel regards the fortieth year as the limit of time in which resections should be made.

In 14 resections of the ankle there were 78 per cent of recoveries. It is best to operate as soon as the diagnosis is made. Riedel prefers Konig's method.

In 16 resections of the shoulder, 12 were cured.

In 4 resections of the wrist, 3 were cures. As in the ankle, an operation should be made as soon as the diagnosis of tuberculosis is established, without reference to the age of the patient.

Riedel recommends iodoform injections in abscesses appearing above Poupart's ligament which result from caries of the vertebræ, also in hydrops tuberculosis, and in old persons where it is advisable to temporize. He speaks against the employment of injections in younger individuals.

It is best to operate before the fistulæ appear because infection with puscocci is apt to cause such intimate adhesions between the surrounding tissues and the tubercular disease that it is at times impossible to effectually remove the latter. A reason for operating early in the disease is that delay exposes the patient to the danger of the development of tubercular processes in other portions of the body.

Sahli of Langenthal (*Corres. f. sch. Aerzte*), writes on the use of iodoform injections in tubercular diseases of bones and joints. The best of all preparations is that employed by Tubingen in which sterilized olive oil is thoroughly impregnated, by prolonged shaking, with 10 per cent of iodoform; 4 per cent dissolves and 6 per cent remains in suspension. The mixture will readily pass through a reasonably small needle, and an ordinary hypodermatic syringe may be used. It is well to partially withdraw the needle and re-insert it, so as to deposit the iodoform in several different foci. There is little doubt that the effectiveness of the treatment lies in liberation of small quantities of free iodine by the gradual action of the fluids of the body. Sahli, contrary to the advice of Bohony, often injects as much as 2 grammes of iodoform-oil at a time and has never produced symptoms of intoxication. Pain or inflammation hardly ever follows and co d compresses, etc., are unnecessary.

Durning four or five week the injections should be made twice a week; and then for the same length of time, once every one or two weeks. The patient should then be carefully watched for some time. In severe cases the treatment must be continued much longer, and the individual should not be lost sight of for at least six to twelve months. Improvement should begin after four or five injections, but care must be taken not to stop the treatment too soon.

Sahli would recommend the treatment of all cases of tubercular disease of bones and joints by iodoform injections, with the exception of those presenting large abscesses, extened destruction of bone, and multiple fistulæ, which are better suited for ampuatation. If nothing is accomplished, at least no harm will be done. The process is especially adapted to the after-treatment of cases which have been curetted. The elbow and the hip-joint responds best and most quickly.

Sahli combines with the injections the creasote treatment, local massage, extension, etc., where indicated. He lay much stress upon strict asepsis in connection with the iodoform injection.—*Centralblatt f. Chirurgie; Med. and Surg. Rep.*

Pathology and Morbid Anatomy of Myxedema.—Dr. Greenfield (Edinburgh *Med. Journ.*) in a paper read before the Medico Chirurgical Society of Edinburgh, says that the primary most essential fact in the pathology of myxedema was the atrophic change in the thyroid gland. There was little accurate knowledge as to the cause of this change. The functions of the thyroid gland were obscure, even with the light that modern investigation had thrown upon them. It was only certainly known that in some way this highly vascular, ductless gland was concerned in the metabolic changes of the nutritive fluids, and that it had some relation to the elaboration of mucin. It probably secreted a material of the nature of a ferment, which rapidly passed into the blood and stimulated the secretion of the skin glands, and in some way acted upon the heart. In myxedema the thyroid gland was atrophied, and in sporadic cretinism it might be almost entirely absent. In exophthalmic goitre there was an exactly opposite condition—an enormous increase in the secreting structure of the thyroid, and also of the colloid material in the spaces of the gland. In ordinary cystic goitre, however, associated with cretinism, there was an enormous increase in its substance. Therefore we should not regard the morbid appearances of the thyroid in myxedema as of too great importance, or put out of our minds other considerations in relation to its function. A very important control research would be to ascertain if feeding with thyroids produced any conditions in the system analogous to those in exophthalmic goitre. In myxedema the sweat gland and sebaceous glands acted defectively, and later atrophied together with other parts of the skin. The normal transpiration being deficient, the lymph seemed to tend to accumulate and stagnate. That this was partly at least correct, seemed to be proved by the remarkable improvement often seen from the action of hot-air baths. There was one point which did not seem to have been observed, and that was

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the altered reaction of patients with myxedema to tuberculosis. They seemed to show a marked proclivity to tuberculosis, while in its course and manifestations the tubercular process was largely modified. All the five cases of myxedema from which he showed specimens died from phthisis, as well as a case of sporadic cretinism he had had. The tubercular processes were characterized by exceedingly rapid progress when they once set in. The power of repair in myxedema was good, to judge from his experience of a case in which it was necessary to do a surgical operation. He had studied microscopically material from seven cases of myx edema and one of sporadic cretinism. In all the cases the thyroid was diminished in size. There was either generally or in parts an advanced condition of atrophy with fibrous overgrowth. In some all gland tissue had disappeared. In some the fibrous tissue was highly cellular. In one there was a lymphoid infiltration. These changes corresponded with what occurred in all glandular atrophies. The changes in the epithelium were also parallel to those seen in all wasting glands. Changes were found in the arteries similar to those found in all chronic interstitial inflammations. In the skin there were marked changes in all the glandular elements and in the hair follicles; they showed various stages of atrophy. Often there was an extensive deposit of pigment in the skin. The epidermis became very thin. The edema appeared to him to owe its characters to the fact that it was more deeply situated than in ordinary anasarca. In the case of other parts, such as the lips and tongue, the edematous condition was also quite deeply situated. In the tongue, patches were often most marked at a distance of a third of an inch or more from the surface. The change might be called myxomatous degeneration of the tissue. In the skin, tongue, and other organs there were sometimes areas of dense fibrous overgrowth. The other organs in his cases, with the exception of the lnngs, which were affected with tuberculosis, were in a practically normal condition. In the kidneys, however, there was occasionally a peculiar swelling and pallor, due to the presence of a myxomatous degeneration around the arteries at their division, and an extension of a myxomatous and cellular infiltration between the tubules in that position, while the cortex was normal. He had found no change in the nervous system, except in the peripheral nerves, in which there were frequently indications of a chronic neuritis. How far this change was due to the disease, he was unable to say. The lymphatic glands and suprarenal capsules were normal.—*Amer. Lancet.*

Treatments of Septicemia With Oxygen.—Dr. A. F. Currier(New York *Med. Jonrn.*), in a paper read before the American Gynecologscal Society, said the inhalation of oxygen was particularly appropriate in view of the readiness with which it was taken by the hemoglobin and its affinity for the waste elements with which the blood was loaded. The capacity of the blood for absorbing oxygen in this disease had not been definitely determined. A limited number of experiments had been made by individuals in health upon themselves, and by others upon animals, but the conditions were quite different from those existing in septicemia. The absence of a sufficient supply of oxygen in sick-rooms generally, especially in the winter, whith closed doors and windows, furnace heat, combustion of lamps and candles, and the respiratory requirements of attendants, was probably an important cause of the higher mortality at that period of the year than at any other. The good results that had attended the treatment of epidemics of typhns fever in tents or in the open air was suggestive of the therapeutic value of oxygen, also the fact that septicemia was comparatively unknown among savages and barbarous peoples, whose lives are passed in the open air. Questions of tension and pressure were not to be overlooked in considering oxygen inhalations. A pressure of three atmospheres would produce convulsions in rabbits. It was usually desirable to administer oxygen freely mixed with atmospheric air. Not only was this the safer method, but the oxygen was thereby rendered less likely to irritate the air-passages. The volume of oxygen necessary for the saturation of the hemoglobin could not be determined in advance in a given case, the corpuscles in septicemia being smaller than in health, and readily becoming disintegrated. The plasma, which in health contained 2 per cent. of the oxygen of the body, would absord more than this if the oxygen was administered under pressure, and in septicemia an additional quantity was consumed in the formation of the carbon dioxide, urea, and uric acid with which the blood was overcharged. Whether the bacteria in the blood in septicemia were killed by oxygen inhalation, was uncertain. Welch thinks they could not be subjected to it sufficiently long or under sufficient pressure to cause their death without also injuring the blood and other tissues. If oxygen was inhaled under suitable conditions by pressure, it stimulated to deeper respiration, the surface of the body became warmer, the pulse grew stronger, and the color of the surface was made more natural. The stimulation of the heart and lungs was,of course,directly favorable to the purification of the blood by elimination of its toxic elements. The stimulation of the nerve centers presiding over functional activity, if sufficient and continuous,would produce a favorable result, whether a direct gremicidal action was exerted or not. In addition to the advantages mentioned, oxygen usually induced drowsiness and sleep, and this was often a matter of sufficient importance to turn the scale in favot of the patient. The treatment should be begun early in the disease, and not after the nerve centers had been poisoned. The simpler the method of administration the better; the principal requirements were that the oxygen be pure, and that it be administered in such volume as to be readily and comfortably tolerated. If administered early enough it would often save life, and in almost all cases it would conduce to the comfort and well-being of the patient and relieve symptoms that could not otherwise be readily relieved.—*Amer. Lancet.*

Contributions to the Operative Treatment of Congenital Hip-Joint Dislocation.—Dr. Hoffa, Wurzburg, (*Munchn. Med. Wehnschr*, 1893) reports the result of cases which he had operated upon and described 3 years ago. The operation consists in the reposition of the dislocated head of the femur into the newly made, or frequently present, acetabulm. The author has up to date, performed this operation 26 times. His experience has taught him that it should be done early, before the muscles attached to the pelvis and the thigh become contracted, otherwise it may become necessary to relieve these contractions. The theories differ somewhat about the success of this operation in congenital dislocation of the hip. For instance, the supposition that in most cases there is an absence of the acetabulum, is not advocated by the author, since close observation will always disclose a flattened space where the cavity should be. Even if not quite plain one can be readily formed artificially.

In order to perform this operation it becomes necessary to increase the depth of the old cavity, care being taken that margins of this new formed acetabulum remain sharp. This will favor the normal posting of the head of the femur, and is more readily done in the cases of congenital dislocation of the femur, since the region of the acetabulum forms the thickest portion of the entire pelvis. The head and neck of the femur present generally no difficulty after once having been replaced.

The author gives further new instructions about the technique of the operation and then presents the results of his operations. The operation will do away with the limping and lordosis of the side; if the dislocation is on both side, the results are equally good.

There is one point to remember in the one sided luxation, and that is, that the operation will entirely remove the probable shortening of the extremity, since during the time before treatment it has become somewhat diseased.

Without operation in the orthopedic treatment such good results are never obtained. This is amply shown in the decidedly hypertrophied ligaments which becomes inclosed between the head of the femur and the pelvis.—*Med. and Surg. Rep.*

The Etiology of the Primary Carcinoma of the Gall Bladder.—Dr. F. Siegert, Geneva, (*Virchow's Arhciv*, 1893) says: The question, is carcinoma of the gall bladder the cause or the result of the cholelithiasis which is so frequently observed with this disease. This is answered by the clinicians, as a rule, that the changes found in the gall bladder due to the presence of carcinoma, together with the failure of contraction and the abnormal secretion or formation of the tumor, all will aid in the production of gall stones.

The proof of this latter view was not generally acknowledged. Clinically the theory was that first cholelithiasis was present and that later the tumor formed in the walls of the gall bladder; pathologico-anatomically it was the fact that in this or that case the size of the gall stone present was in direct relation to the age of size of the carcinoma.

A third method is described by Sigert; for instance, if the carcinoma is the cause of cholelithiasis, it would become absolutely necessary that gall stones should form with equal rapidity in primary or secondary carcinoma of the gall cyst.

The auther has studied the literature of this subject carefully, and has collected a number of cases which have led him to the following result. The primary carcinoma of gall bladder was found, 15 per cent. in males and 83 per cent. in females (2 were doubtful, since their description in literature was somewhat vague). Of 95 per cent. of gall stones, in 8 per cent. there was no primary carcinoma and in 2 per cent. it was doubtful. On the other hand there were found of secondary growths 77 per cent. in males and 23 per. in females; of these there were in from 15 to 16 per cent. gall stones present, and in 84 to 85 per cent. none.

Through these fact we have a certain amount of proof that secondary carcinoma of the gall bladder does not always of a necessity produce cholelithiasis. Should this occur in the secondary form occasionally it may be just as much due to a possible previous formation of stone.

In primary carcinoma gall stones are found almost without exception while in the secondary form only exceptionally. For this reason the author thinks that the formation of the stones in the primary carcinoma are not the result, but may be the cause of the same (stones were found in cases in which macroscopically a carcinomatous change of the gall bladder could not be proven, reference case 7 of the original).

The primary carcinoma is found 5 to 6 times more often in woman than in men; the cause is supposed to be a mechanical one namely, tight lacing, The secondary form, however, occurs more frequently in the male, which can be explained by the faet that the primary seat of the carcinoma is more often found in the degestive tract, which is not the case in the female.—*Med. and Surg. Rep.*

Limited Importance of Albuminuria in the Diagnosis of Bright's Disease.—In a recent address delivered before the Academy of Medicine of Paris, Dieulafoy tried to prove that too much importance is given to albuminuria in establishing a diagnosis of Bright's disease and gauging its gravity, basing his opinion upon observation in sixty cases taken from his hospital wards and duly classified.

In the first category were included six cases in which death followed all the major signs of uremia, after having presented most of the minor signs; no albumen, however, had been found at any time, although the post-mortem examination demonstrated the existence of characteristic lesions of Bright's disease.

In a second group he placed certain cases in which al-

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bumen was found at certain periods only, outside of which periods it was impossible to diagnose chronic nephritis by searching only for the pathognomonic symptom, albuminuria. Dieulafoy therefore concluded that this symptom had but little value in the diagnosis of Bright's disease. It should only serve to confirm the presence of the disease as corroborative evidence; for being far from trustworthy, it might otherwise lead to a diagnosis of Bright's disease in subjects having had albumen a long time without showing signs of ill health. To avoid having recourse to a symptom proven to be so untrustworthy, this illustrious observer proposes that one should make use of those "minor signs," for the most part unperceived generally, which he was the first to describe under that name in his work on the subject. These minor sings, according to him serve to indicate the initiatory stage of Bright's disease, the malady itself being characterized by the major signs, such as dyspnea, cephalalgia, convulsions. He describes, in turn, the symptoms furnished by the sense of hearing,—the buzzing and whistling varieties of tinnitus so frequent in cases of Bright's disease; the strange sign that he designates as the "doigt mort" (dead finger), characterized by a sensation analogous to that produced by putting one's fingers into snow; itching, etc. He also speaks of cryesthesia, that sensation of feeling cold peculiar to victims of Bright's disease; slight epistaxis in the morning, and also the painful cramps in the legs which only cease on the patient's getting out of bed, are also symptoms to be noted.

Dieulafoy has always found these minor signs of use in the diagnosis of chronic nephritis; and had them controled by measuring the degree of toxicity of the urine of patients; he always fouud a smaller degree of toxicity than is normal, this serving to prove that the substance to be eliminated by the kidneys remained in the system to gradually poison it.

As to treatment, Dieulafoy considers that milk diet is the only effective means at our disposal. He dose not attach much importance to the variations in the quantity of albumen excreted while under the influence of this treatment as the improvements—the cure, even of certain patients—is shown by the disappearance of the minor signs, sometimes even by that or the major symptoms. This he has witnessed in two groups of patients where the two pathological conditions were associated—Bright's disease and chlorosis on one side, and Bright's disease and syphilis on the other.

He also examined into the matter in which Bright's disease is modified by being associated with gout, chlorosis, or kindred affections. Gout shows itself in the kidneys either by calculi or by nephritis. The kidneys of a gouty subject should therefore be well looked to, as nephritis of an arterial nature is apt to supervene. As to the prognosis, a distinction must be established, in a gouty subject between the minor signs of Brigthism and albuminuria appearing by itself, in the latter case, it is simply a case of gouty albuminuric diabetes, without much gravity.— *Univ. Med. Journ.*

Cerebro-Spinal Meningitis. — F. Klemperer (*Berl. k. Woch.*) reports three cases of this form of meningitis. Case 1. Woman, aged 18, both of whose parents had died of phthisis, had been ill for three or four days with pain in the head and giddiness. On admission there was stupor, restlessness, and great irregularity of the pules. The abdomen was indrawn, the neck stiff, and the head slightly retracted. The next day there was vomiting, cutis anserina, and *tache cerebrale.* Two days later the stupor was marked, the pupils reacted sluggishly, and labial herpes was present. The pneumococcus was cultivated from the herpetic vesicles, but its virulence was shown experimentally to be slight. The next day the meningeal symptoms were more marked, and there was epistaxis. From this time the patient began to improve, and was discharged completely well about a month after admission. Case 2. Woman, age 29, began to ail four weeks before admission with pain in the joints, and later, in the right side of the chest. Exploratory puncture here yielded clear fluid. On February 24, there was some stupor, headache, pain and stiffness in the neck, and a rise of temperature. February 25, there was vomiting, restlessness, and tremulous movements in the face muscles. On February 27, the pulse was irregular and herpes appeared. Next day there was Cheyne Stokes breathing. The fundus oculi, as in the preceding case, was healthy. Later the left pupil was less than the right, both reacting sluggishly. From March 10, there was slow improvement, ending in complete recovery. Case 3. A girl aged 16, whose father had died of phthisis, became suddenly ill three days previously with fever, vomiting, and pain in the back. On admission she was apparently unconscious and very restless. There was great rigidity of the neck, clonic spasm in the left arm, and later weakness in the right side. On the sixth day, herpes appeared, from which diplococci were obtained. She died on the eight day and pneumococci were cultivated from the meningeal exudation. There was no tubercle anywhere. In all three cases many things appeared in favor of meningeal tuberculosis. The author discusses the relation of labial herpes to herpes zoster, and he says that the identity is not yet estblished. He has investigated bacteriologically the fluid from fourteen recent and five older cases of labial herpes. He thinks that this herpes represents a special localization of the original disease, or that when it is the expression of a mixed or secondary infection it seems as though an ordinary and non-specific cause acts as the etiological or complicating factor. The author thinks that labial herpes justifies the dignosis of a non-specific or so called epidemic meningitis as against the tuberculous form. He admits that there is much that is hypothetical in this idea and that a single case of tuberculous meningitis with herpes would overthrow it, provided that a mixed infection was rigidly excluded. Herpes may accompany the suppurative meningitis of the tuberculous, but not pure meningeal tuberculosis. Recovery is more probable if the meningitis be of the simple kind and not tuberculous.—*Br. Med. Journ.*

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The Diagnostic and Therapeutic Value of Puncture of the Spinal Canal —Puncture of the spinal canal and evacuation of a portion of the cerebro-spinal fluid has been recommended by Quincke in hydrocephalus for the purpose of reducing the pressure in the central nervous system Ziemssen has employed this procedure in several cases of tuberculous cerebro-spinal meningitis, cerebral thrombus, etc., and confirms the statements of Quincke. The punture is performed under chloroformed narcosis, and the spine must be flexed so as to enlarge the intrspaces between the vertebral arches. According to the existing conditions of pressure the cerebro-spinal fluid flows out more or less rapidly. In a case of epidemic cerebro-spinal meningitis the exudation was turbid and contained sbreds of fibrine and diplococci. In both these diseases a decrease of cerebral pressure always ensued after the puncture. Decided inprovement was observed in a case of tuberculous meningitis after the procedure, the puncture being repeated four times. It is probable that examination of the evacuated fluid may throw some light upon the diagnosis.

Bruna performed trephining of the skull in three cases of brain tumors for reducing the cerebral pressure, and was successful in two cases.

Quincke has performed puncture of the spinal canal in twenty-two cases, and concludes that too great expectations of the therapeutic value of this procedure should not be entertained, since the fluid collects very rapidly. In his opinion the examination of the evacuated fluid furnishes some data of diagnostic and prognostic value. He found that in simple hydrocephalus the fluid contained less than one-tenth per cent. of albumen while an amount of albumen exceeding this point to the presence of an inflammatory-exudation, and one exceeding two-tenth per cent. is occasionally found in cases of tuberculous exudation. In a case where the fluid withdrawn contained blood, there was found cerebral hemorrhage with entrance of blood into the ventricle. The condi tions of pressure vary exceedingly. Quincke regards puncture as indicated in cases of acute exudations of serous or tuberculous character. To prevent reaccumu lation of the fluid, with consequent increase of the pressure symptoms, he incised the dura and established a kind of drainage. In two cases of hydrocephalus in children, the fluid constantly escaped into the surrounding tissues.

Ewald states that in chronic hydrocephalus puncture effects a temporary improvement which, however, is of short duration.

Sahli has repeatedly resorted to puncture of the spinal canal in cases of tuberculous meningitis. To bring about a better outflow, he has tried drainage of the spinal canal, but found that an elastic catheter used for this purpose became twisted, while a metal tube was occluded by blood coagula. He recommends a large opening of the canal with the thermo-cautery

Naumyn has empolyed puncture in seven cases. In one case the fluid could not be evacuated on accunt of its purulent character. He regards this procedure as easly carried out, and finds anesthesia unnecessary.—*Inter. Journ. of Surg.*

Iron in Chlorosis.—The fact of the pre eminent value of iron as a remedy for anemic conditions is thoroughly established; the mode of its action is still a matter for dispute. Under a course of iron the quantity of iron in the red blood corpuscle and the number of these corpuscles undoubtedly increases in favorable cases. But whence does this iron come? From the iron administered? Or from the iron of the food? Does the iron administered yield ferruginous matter directly to the corpuscles of the blood? Or does it simply improve the condition of the digestive canal, so that more of the organic iron of the food is taken up by the corpuscles? If the latter is the fact, then may not other drugs having similar and even more intense action upon the digestive canal, be of still greater value than iron in anemic diseases. With a view to the solution of some of these problems an instructive series of investigations has been made by Dr. Stockman, as reported in recent numbers of the *British Medical Journal.*

His effort was to determine the influence of iron administered subcutaneously upon chlorosis. For, if it is well marked, it will be evident that the chief benefit of iron as ordinarily given is not obtained through local action upon the digestive canal. In four cases of chlorosis treated by hypodermatic injection of urine salts, very rapid improvement was observed, as shown both by microscopic examinations of the blood and by the general apperrance and sense of well-being of the patients. The salts of iron thus used were the peptonate of iron and the citrate of iron and sodium; these were dissolved in water, the dose being one half grain, or more commonly one-fourth grain, in each daily injection. Improvement was as marked as if large doses had been taken by the mouth.

None of the patients ever objected to the injections, which were made into the thick tissues of the back, and produced no disturbance other than a slight local hardness. The dose, however, is necessarily small, even one half grain of iron causing in one case nausea and colic. As iron can usually be comfortably taken by the mouth, its hypodermatic use, except in special investigations, is not recommended.

In his further clinical experiments the influence of bismuth oxide, subnitrate, and salicylate; of arsenic; of manganese binoxide and sulphate; and of muriatic acid was successively tested in cases of anemia chlorosis), but no marked benefit was observed.

Dr. Stockman finds that the organic compounds of iron are much less efficient than the inorganic. Moreover, a rich and varied diet, containing plenty of organic iron, does not ordinarily cure a patient. Inorganic iron must be combined with it.

The ferruginous preparations made from blood (such as "hemol" and "hemogallol") gave likewise no beneficial results.

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It should be remembered, in conclusion, that women have normally less hemoglobin (and so, less iron) in the blood proportionally than men.

"No proof has yet been given," says Dr. Stockman. "that any one inorganic preparation of iron cures chlorosis more quickly than another.—Maryland *Med. Jour.*

The Action of Alcohol on the Circulatory System.—Z. Gutenkorn (*Zeit. f. Klin. Med.*) says: The internal administration of alcohol diminishes the blood pressure, in the first place as a result of dilatation of the arterials, and not because of any diminution of the force of the heart. If the latter were the case, a damning up of blood would take place in the left auricle, with a consequently increased blood pressure there; but the very opposite takes place, as the ventricle contracts more vigorously and drains the auricle of its contained blood.

Alcohol also acts as an analeptic—at the same time producing diminishing blood pressure form a diminished excitation of the vaso-motor centers. The greatest amount of arterial dilatation takes place in the pelvic region.

The diminished blood pressure resulting from the cutting of the splanchnic nerve is not increased by the administration of alcohol. Irritation of the nerve increases the blood pressure after it has lessened by the administration of alcohol.

Alcohol has no deleterious effect either on the vaso-motor nerves or on the vagus.—*Canadian Practitioner.*

Thyroid Feeding in Psoriasis.—At the last meeting of the British Medical Association Dr. Byron Bramwell read a paper on the influence of thyroid feeding on the nutrition of the skin, especially in cases of psoriasis. His attention had been drawn to the improvement of the skins in patients under thyroid treatment for myxedema and hoping to aid the nutrition of the skin in psoriasis he made trial of this remedy in selected cases of long standing psoriasis. To thoroughly test the treatment all other remedies were omitted and a small dose of thyroid given daily. In all his cases a visible improvement occurred after a few days' administration. The inflammatory redness was lessened and there was considerable desquamation of cuticle over the affected parts. In one patient the eruption grew worse, in two there was no benefit, but in every other instance there was marked and continued improvement. In one case only has there been a slight relapse. "All the patients who were thus treated had the disease in a chronic and obstinate form, and had been subjected to all kinds of ordinary treament, but without success." Dr. Arthur Davies also reported independent observations on two cases of psoriasis which had improved very rapidly under thyroid treament, one reaching a complete cure. The uncertainty of obtaining permanent results in treating psoriasis should restrain undue confideuce in the new remedy, but the careful selection of cases and the exclusion of other treatment during the trial, lends force to Dr. Bramwell's report—and further trial will be watched with interest.

Europhen in Specific Lesions.—The value of cresoliodide or Europhen in all cases amenable to the usual, iodoform treatment is now well knewn to most surgeons. But the superiority of Europhen in the treatment of venereal ulcers has not received due attention from any but syphilographers, except in isolated groups of cases. n a large number of reported cases of chancroid healing took place in every instance between four and sixteen days. An eligible mixture for these sores is Europhen and boric acid in equal parts (or stronger if required) and applied as a powder and covered with sublimate gauze. Crusts should be removed and the surfaces washed with sublimate solution before each application. In chancroidal bubo, the cavities are packed with tampons dipped in the Europhen boric mixture. No irritation is caused even when considerable quantities are employed. For moist papules cicrtrization was induced in from three to ten days by dusting 1 to 5 Europhen-boric powder over the lesions. To insure efficacy, the powder must be brought in direct contact with the moist secreting surfaces.

A New Method of Cutting Esophageal Stricture.—Abbe describes a new method of dividing cicatricial stricture of the esophagus, which he practiced with very good results on a patient age 30. After the performance of gastrostomy, a digital examination is made of the lower esophageal orifice, and a small conical gum-elastic bougie is guided into the canal by the finger. A string of heavy-braided ligature skin is carried from the stomach to the mouth by passing a very small bougie through the esophageal sitricture. In the case reported by the author, the upper end of the string was brought out by the neck through a wound which had been made in an unsuccessful attempt at external division of the stricture. A large bougie is now passed from the stomach alongside the string, and pressed tightly into the stricture so as to stretch it. The string is now drawn upward by the fingers, passed to the back of the patient's mouth, and the bugie will be felt to advance at once as the string makes its way into the tense stricture. Larger bugies are now passed, and the string is "see-sawed" upward and downward. When the largest size has been passed, a rubber tube of corresponding size is drawn through the esophagus past the point of stricture, its lower end remaining outside the wound in the stomach. A smaller tube is passed into the stomach for nourishment. The patient can thus drink water for refreshing the mouth, swallow saliva without contaminating the wounded surface which the tube also serves to keep dilated. The large tube may be removed on the second or third day, and dilating bugies be introduced by the mouth after the fourth day. Finally the gastrostomy wound may be closed, whenever the patient has gained strength, by a plastic operation.—*Med. Rec.*

MEDICAL SOCIETIES

First Pan-American Medical Congress.—The following papers were read at the meeting of the Pan-American Medical Congress (N. Y. *Med Journ.*) held in Washington, September 5, 6, 7 and 8, 1393:

SECTION IN GENERAL MEDICINE.

THE HISTORY OF MALARIAL FEVER IN THE VALLEY OF THE ORIZABA, AND ITS RELATION TO TYPHUS FEVER.

Dr. G. Mendizabal, of Mexico, added a paper on the subject of malaria. He pointed out some clinical facts showing how the symptoms of typhus and typhoid were modified by the presence of malaria and other extrinsic and intrinsic agents. To successfully deal with malaria and associated diseases a positive diagnosis must be made, and for this the microscope was the sheet anchor.

TYPHOID FEVER.

Dr. W. C. Dabney, of Virginia, read an abstract of a paper on this subject. The outbreak of fourteen cases of continued fever, which had occasioned the writing of the paper, had occurred at the University of Virginia between January 15 and April 1, 1893. A careful inspection and research into the sanitary conditions of the buildings and water supply had not resulted in the discovery of any cause for the epidemic in that direction. Next, the habits and outside associations of the five hundred and thirty students attending the college at the time had been closely inquired into, with negative results. The milk supply had next been investigated. The dairy at which the milk had been obtained was some distance from the University. At various times the milk had been tested and found free from added water, but careful inquiry had disclosed the fact that the cows' teats had been washed in water contaminated with sewage and probably infected with typhoid-fever germs. It was in evidence also that at least five of the fourteen persons having the fever had used milk at every meal. Of the fourteen cases, twelve had presented the typical features of typhoid fever; the other two had passed from under the writer's observation.

Dr. Claibonne, of Virginia, said that there was always great difficulty in diagnosticating continued fevers in malarial districts, and that for his part he was old-fashioned enough to confine his diagnosis of typhoid fever to those conditions that presented the pathognomonic sign of ulceration of Peyer's glands.

He was sorry that Dr. Dabney had had no opportunity of verifying his diagnosis by autopsy. As the history of the cases did not present typical symptoms, the speaker did not see how they could be classified. He said that in his part of the country cases of fever without distinctive features were called typho malarial. Referring back to Dr. Risquez's paper, he thought that it would be a great step in advance if the pigment in the blood could be established as pathognomonic of malarial disease; it would do away with the difficulty in diagnosis. It was the speaker's practice to diagnosticate malarial fever by the administration of quinine; if the daily ingestion of twenty grains did not cause an evening reduction of temperature, he was not dealing with that disease.

Dr. J. W. Larrabee, of Texas, said that last winter, in Louisville, forty cases of typhoid fever had occurred from a milk supply. The contamination had been from the water, which had simply been used to wash the cans, and not to dilute the milk with. He also thought that in a malarial district it was almost impossible to make a diagnosis. His custom was to prepare the patients by a dose of calomel, and then to administer quinine; if no benefit was derived and the fever was continuous, the case was probably typhoid. He thought that the term typho-malarial was very misleading, and that to its door many disastrous results could be laid.

Dr. S. Solis-Cohen, of Philadelphia, said as there was no *a priori* reason why the name typho-malarial fever should not be used, he wonld like to hear what those present had to say about mixed infection. He thought that if the pigmentary masses in the blood could be decided upon as distinctively characteristic of malaria, the diagnosis by exclusion would be much facilitated. Thus far he had always been able to decide whether a given case was malarial or not by the quinine test. His method was to use a single hypodermic injection of quinine dichloride and urea. If the case was malarial, the proof would be the absence of the regular chill. He had used quinine chlorhydrosulphide, but he considered the dichloride superior for controlling the after chill.

Dr. Sibet, of Carlisle, Pa., explained the peculiarities of typhoid fevers in his community. During a recent epidemic of fever forty-two cases had been closely observed, and it had been found almost impossible to decide what the fever was. He could not say in cases of continued fever where or when the typhoid began or when it ended. For his part, he was inclined to believe that the poisons of continued and typhoid fever were one and the same thing, and that the intensity or mildness of the attack would depend upon the *vis medicatrix naturæ* of the individual.

Dr. West thought an important point would be gained when it could be decided whether or not there was a typhoid condition without typhoid fever, and *vice versa*, and also what was the real nature of the disease when patients walked about until intestinal perforation took place. In his section of the country there was a prevalence of atypical cases of typhoid, and he made it his practice to diagnosticate the cases with the aid of quinine. Where there was no benefit from the drug he excluded malaria. He did not think that two poisons could act simultaneously, and therefore did not believe in mixed infection.

Dr. Wilcox, of South Carolina, said that he did not attempt to diagnosticate atypical cases, but confined

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himself to classical symptoms. Whether it was a poison or not that did the mischief he did not know, but he was satisfied that combining influences very often masked symptoms in fevers, so that a positive diagnosis from clinical conditions alone could not be made.

Dr. Anders, of Philadelphia, thought that it was pretty safe if, during a mild or otherwise irregular endemic or epidemic of fever, a few cases of typical typhoid occurred, to call the disease typhoid fever.

Dr. Vaughan said that, while there might be such a thing as typho malaria, or the combination of the two poisons, as yet it had never been demonstrated, and he was loath to believe in its existence. One theory in regard to the causation of typhoid fever was that the disease could not exist without the presence of a germ, which was always one and the same, and produced the specific poison. Another theory was that the germ was a modified form of the *Bacterium coli commune*, which under certain circumstances became virulent and produced typical typhoid fever. The speaker's theory was that typhoid was caused by any one of a number of germs that did not bear any resemblance to each other. And it was for this reason that the symptoms were so varied and the conditions so unlike in a given epidemic. He had just been through an epidemic of six hundred cases in Michigan, and had made very careful investigations, but was obliged to say that he had never as yet seen a typical case of typhoid fever, as set down in the text books, and had never been able to discover the typical German germ. The drinking water that supplied the district infected during the recent epidemic had been carefully examined, and the Eberth germ had not been found, but a germ which differed from it very materially had been discovered in the spleens of persons who had died from the disease. The drinking water had also contained the same germ. The speaker did not believe that sharp lines could be drawn between the continued fevers, and different names applied to them meaning a difference in their pathology. He believed that the germs of typhoid were very widely prevalent, and that the only reason why the disease was not more prevalent was that the large majority of people were proof against their influence.

Dr. Dabney did not think that typhoid fever was modified by the existence of malarial poisoning. As for text book symptoms, he thought they were influenced by location; in his district, for example, it was rare to see the eruption. He was not prepared to say whether the Laveran and the Eberth germ could exist in the same person at the same time or not.

A Contribution to the Clinical Study of Prolonged Remittent Fever.

Dr. David Lobo, of Caracas, Venezuela, added his experience to that of the other speakers as to fevers. He said that the normal type of malarial fever—the intermittent form—was rarely met with in Caracas, and its presence, when noticed, could generally be traced to genuine sources of infection. Close examination seldom disclosed any marked congestion of the liver and spleen in cases which had developed within the bounds of the city. The aspect and extraordinary course of the pyrexia were probably due to the corresponding variations in the power and quality of Laveran's corpuscles, to overpoisoning of the blood, or to some distinct element operating simultaneously with the paludal germ. The variations in temperature did not respond to any fixed law of recurrence; it generally ranged from 38.5° to 40.5° C, and dropped or rose unexpectedly. Remissions took place at any moment of the day. Intermissions might occur, but they could not be counted upon Chills and sweating might be observed, but never as definite stages of the fever. The circulation and respiration did not exhibit any deviations except those induced by the reaction of the organism under the influence of abnormal heat. The appetite was either very poor or absent, with a tongue smooth, clean and moist. The bowels were usually normal in action. Intense abdominal pain, meteorism, and profuse diarrhea or obstinate constipation were indicative of some complication located in the intestines and not of the disease. Vomiting might occur, but it was not a feature. The urine was normal. There was, as a rule, an entire absence of nervous symptoms. The fever frequently ran its course entirely free from complications. Its duration ranged from fifteen to twenty days. The principal features of the disease were, then, the irregular temperature and the lengthened course. The main points by which protracted remittent fever could be discriminated from other malarial fevers were its uncommon course, its irregular temperature, the absence of marked stages of hepatic or splenic troubles, and its resistance to quinine. Between it and typhoid there could be no possible confusion; typhoid was cyclic in its career, was accompanied by intestinal lesions, presented peculia eruptions, and, besides, was extremely rare at Caracas. The so-called typho-malarial fever exhibited typhoid symptoms, which were never present in ordinary remittent fever. The vomiting of black matter and albuminuria were so perfectly distinctive of yellow fever that no mistake could be made in that direction. Pernicious fevers were distinguished by their short duration and characteristic aspect. In regard to prognosis, where complicating or intercurrent processes did not occur, a fatal issue was seldom to be feared. The fever might give rise to a special inflammation of the lung to which the term pseudo-pneumonia had been applied. Bronchial respiration was an early sign, and the crepitant rale was absent. Cerebral congestion was an occasional complication, and when it occurred the issue was fatal in nine cases out of ten. Hemorrhage and acute peritonitis were apt to occur as secondary phenomena subsequently to ulceration of the digestive duct. The treatment of protracted remittent fever required the closest attention, and the symptoms were to be combated as they arose. Quinine as a drug was almost worse than useless in influencing the disease. Warburg's tincture had been

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found to be the most valuable remedy. Tonics should be prescribed from the first.

Dr. W. F. Thayer, of Baltimore, described the types of malarial fevers as found in his section of the country. He also gave a detailed explanation of the appearance of the micro-organisms found in the blood in the different forms of malarial fever. The main types of malarial fever with which the American physician was familiar each had its own organism, which could be traced through its different stages of development to the destruction of the blood-corpuscle.

Dr. Lobo wanted to emphasize the fact that he excluded the protracted remittent fever of Caracas from any other class, and made it a type by itself. Typhoid was almost entirely unknown in Caracas, and from malarial fever it was, by every means known to the diagnostician, absolutely dissociated. Just what combination of influences had caused the fever the speaker was unable to say.

SECTION IN GYNECOLOGY.

Drainage of Ovarian Cysts Where the Adhesions are Such That it is Impossible to Remove the Sac.

Dr. A. Vanderveer, of Albany, whose paper had the foregoing title, called attention to the fact that the condition of patients who were to undergo an operation for abdominal tumors was often not ascertained with sufficient thoroughness. His plea was for a more complete knowledge of symptoms and more frequent examinations. Of course, the examinations must be of such a character that the patient's condition would not be made worse. In some cases the environments of the tumor could be so thoroughly mapped out that a severe operation would be almost a certainty. In such cases and especially if the vital force of the patient had been much reduced, it had seemed to the speaker that the chances of recovery would be increased by not attempting to remove those portions of the tumor sac which were extensively adherent, but by attaching them instead to the abdominal wound and submitting them to drainage. Of course, this might also subject the patient to a certain amount of risk from sepsis, but it would minimize the shock of the operation and probably increase the chances of recovery.

Dr. C. P. Noble, of Philadelphia, believed that if one were attacking a malignant tumor of the abdomen and the adhesions were abundant, one should not attempt to do a complete operation, for the result would be a fatal one at no distant day in any event. If the disease was not malignant, he believed that an attempt should always be made to remove the entire diseased structure. One could be certain that death would be the inevitable result in some of the cases, especially those in which the intestines were crowded forcibly upward by the tumor against the diaphragm and liver.

Dr. A. F. Currier, of New York, thought long-continued success in operating sometimes created false confidence, which was bad for patient and physician. Two classes of adhesions might be considered, in one of which the intestines or other viscera were seriously implicated functionally. These must be released at all hazards. In the other class there was an indurated mass in which the viscera might be imbedded. It was often well to leave this mass undisturbed. Leaving a portion of the tumor sac and draining it would follow.

Dr. A. Lapthorn Smith, of Montreal, thought the principle aimed at in the paper was that protracted operations were almost sure to be fatal.

Dr. I. S. Stone, of Washington, observed that in cases which offered little prospect of recovery there was sometimes unexpected success, because the operator had not attempted to do too much upon a very feeble patient.

Dr. E. W. Cushing, of Boston, did not believe that any fixed time limit for operations was possible. Prolonged operations were not necessarily fatal.

Dr. Vanderveer remarked that his subject did not include the consideration of malignant abdominal tumors, the entire removal of which was often impossible. He would also say that he was not in favor of the use of the thermo-cautery and solutions of iron for hemorrhage in abdominal operations though they had been advocated by some authors.

The After-Treatment of Celiotomy Cases with Special Reference to Shock and Septic Peritonitis.

This was the subject of a paper by Dr. Eugene Boise, of Grand Rapids, Mich. Three conditions following operation required intelligent action: hemorrhage, sepsis, and peritonitis. Shock was a paresis of the sympathetic nervous system, primarily a super-irritation of the entire sympathetic system, intense stimulation of the entire sympathetic system with cardiac and arterial spasm. Its second stage was a paresis due to exhaustion of the heart. Hence in the first stage the indications were for hypodermics of codeine, nitrite of amyl, and nitroglycerin, with copious injections of hot water into the colon. In the second stage the indications were for strychnine, digitalis, and intra-venous infusion of a hot saline solution. Prevention of sepsis prevented peritonitis; hence the peritoneal cavity should be made as clean as possible, and drainage and free catharsis were indicated after the operation, a tube or piece of gauze being employed for the former. After every abdominal section there was always a free flow of serum from the blood vessels into the peritoneal cavity, depleting the vessels, and during the first few hours after such an operation there was paroxysmal abdominal pain, which might be very severe. This was due to irregular and spasmodic peristaltic action, the muscular coat of the intestine contracting unequally and sometimes causing obstruction. Again, as fluids were usually withheld from the patient immediately after an operation, this fact, with the intraperitoneal effusion referred to and, in some cases, profuse perspiration, resulted in depletion of the intestinal blood vessels. Hence, in order to

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produce catharsis easily, the current must have ceased to flow from the blood-vessels toward the peritoneal cavity. The spasmodic contraction of the blood vessels must be overcome, and the blood-vessels must be replenished. Serous effusion would cease after a few hours. Spasmodic contraction of the intestinal muscle might be overcome by a hypodermic injection of codeine, and the bloodvessels might be filled by injecting hot water into the rectum Catharsis could then be readily effected.

Dr. E. W. Cushing, of Boston, knew there was great difference of opinion concerning the usefulness of opium after abdominal operations, but he felt that its function of relieving pain and stimulating the heart during the first few hours after an operation should not be overlooked or lightly considered. The obstruction of the bowel which so often followed abdominal operations might be due to imperfect preparation of the patient prior to the operation or might be a result of the operation.

Dr. Tuck, of Cambridge, Mass., said the temperament of a patient was a matter of great importance in preparing her for an operation, some women and some races being extremely sensitive, others not at all. This fact had a bearing upon the prognosis of operations. Great stress should be laid upon the importance of thoroughly clearing out the intestinal canal prior to an operation, calomel and salts being freely used. The salines might be injected under the skin before an operation, with prompt and beneficial result. The condition of the heart should also be attended to before operating.

Dr. C. P. Noble, of Philadelphia, believed that the best way to treat shock was to prevent it as far as might be. Important measures were to keep the temperature of the operating room at from 75° to 80° F, to keep the patient well covered with blankets, and to use no wet towels on the body. After the operation, if the heart was weak, large hypodermics of strychnine should be used—as much as a fifteenth of a grain every three or four hours—until muscular twitching occurred. The speaker always gave an eighth of a grain of morphine immediately after an operation if pain was present. Another important point was to keep the patient warm and dry after the operation, the perspiration being frequently wiped away and the limbs rubbed.

Dr. R. T. Morris, of New York, believed that no chemicals should be used in the abdominal cavity, as they injured the epithelium of the peritoneum and encouraged the formation of adhesions. A normal saline solution was the only fluid which could be used without harm.

Dr. J. H. Carstens, of Detroit, suggested the valuable aid to be obtained by the administration of turpentine, in doses of ten to fifteen drops, when the abdomen began to be distended.

Dr. Boise did not favor the use of strychnine immediately after an operation. The nitroglycerin and nitrite of amyl were given to relax the arterioles.

NOTES AND ITEMS

A New Method of Politzerizing.—Everyone who has tried it knows how difficult it is to get the patient, whom it is intended to "Politzerize," to swallow at the proper moment (*Med Times and Hosp. Gaz.*). Under these circumstances, and as this plan of clearing the Eustachian tube is just now very much in vogue, our readers may be glad to know of a novel and vastly more simple way of attaining the object in view. In Politzer's method, as is well known, in order to prevent the air insufflated into the nose from escaping through the pharynx instead of passing into tympanic cavity, the patient is asked to sound certain vowels or to swallow a mouthful of water, because in uttering certain vowel sounds, and during the act of deglutition, the soft palate is applied to the posterior wall of the pharynx. The naso-pharyngeal cavity, however, is only partially excluded by these means, and that for a very short time. Dr. Roydan therefore suggests that the patient be directed to take a deep inspiration and then to blow out the air through a small aperture between his closed lips. So long as the patient blows the velum palati remains in contact with the posterior wall of the pharynx, and Politzerization can be performed without the slightest difficulty.

Doctors' Fees in England.—English fees have lately been ventilated in the London High Court of Justice (*Med. Stand.*). Dr. Keetley, Senior Surgeon of the West London Hospital, sued Prof. Banister Fletcher for $2,000 for attendance upon the latter's son, who was badly hurt in the terrible railway disaster at Burgos some time ago. Prof. Fletcher paid $500 into court, declaring that to be an adequate payment for the services rendered. Dr. Keetley testified that he thought $150 a day was a fair remuneration for his undivided attention, even for a day's work in London. He received $75 a day whenever he attended court for an insurance company with which he was connected professionally. Dr. Alfred Cooper testified that, in his opinion, the charges were moderate in the extreme. For himself he should charge $2,000 for a trip to Paris, and $150 or $200 a day while he remained there. For going to Burgos he should charge $5,000. For bringing a patient home from Burgos and taking care of him during a three days' journey he should charge $2,500. For devoting his whole time to a patient in Londen he should not consider $40 an hour an excessive charge. Other surgeons gave similar testimony, and finally the jury decided that Mr. Keetely was entitled to $1,750, a verdict that gave him a substantial victory.

The Largest Pharmacy in the World.—According to the *Chemist and Druggist*, July 29, the pharmacy of Karl J. Ferrien, of Moscow, is the largest in the world, and puts up daily more prescriptions than

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any other (N. Y. *Med. Journ*). As many as twelve hundred prescriptions are put up in a day. The dispensing is done in a glass domed room where twenty-four or more apothecaries are employed, and a clerical and apprentice force nearly as numerous gives a portion of its time to the reception, entering, and delivery of the goods ordered and prepared. If poisonous ingredients enter into the composition of a medicine to be prepared, the checking of weights is done by a weigher specially appointed for that purpose. The *coctorium* has its walls and floor and fittings, as far as possible, made of white marble, and every attention is paid to keeping it scrupulously clean. The lighting is done by electricity. In all, two hundred and ninety three men and boys find employment in the retail and wholesale departments of the establishment. The average number of prescriptions is not far from three hundred thousand annually, and the average amount of money received for their dispensing is three hundred and sixty thousand roubles. It is alleged by the *Pharmaceutische Post* that this gigantic business is founded on a reputation earned by Mr. Ferrein for the purity of his drugs and for absolute accuracy in dispensing. The founder died in 1887, but his two sons perpetrate their father's name and methods of business.

Journalistic Appreciation of Medical Men.—The following article appeared in the editorial columns of the *Sun* September 28 (N. Y. *Med. Journ.*):

"There are always risks for doctors in attendance upon patients suffering from contagious or infectious maladies. Yet they are always ready to brave the danger without flinching, in the interest of humanity. Honor to our noble army of doctors

"Hundreds of them volunteered for service here last autumn when the city was threatened with cholera We do not know how many of them have sent word to Surgeon-General Wyman that they stand ready to go to Brunswick or to any other part of the South in which the yellow fever may break out. Whatever be the risks from any disease, the medical faculty is ever willing to confront them. Long live the doctors! We have sent American doctors to the cholera infected ports of Europe, and several of them have done splendid work there this year. If a hundred of them had been needed, we have no doubt that a thousand of them would have offered their services. Heroes are the doctors. They will enter a pest house without shrinking, attend to every case in it, and do all that can be done to relieve the sufferers. Blessed be the doctors! They are men of science, men of skill, men of earnest purpose, men of sympathetic disposition. They are devoted to their duties. Dr. Walter Vought, who died of typhoid fever in the New York Hospital, of which he was House Physician, was a man of talent, and still in his early prime. He took charge of the quarantine station at Fire Island last year during the 'cholera scare'; he had rendered service in the Vanderbilt Clinic; he died in a hospital. Though he had just turned thirty years of age, he was the author of works upon malarial fevers, the cholera, and other diseases; he had already won a name in the profession. We knew him personally, and we can testify that he was a high-minded gentleman.

" 'There's rosemary, that's for remembrance; * * * and there is pansies, that's for thoughts.' "

Night Air.—Before we can hope to fight consumption with any chance of success we have to get rid of the night air superstition. Like the dread of cold water, raw fruit, etc, it is founded on mistrust of our instincts. It is probably the most prolific single cause of impaired health, even among the civilized nations of our enlightened age, though its absurdity rivals the grossest delusions of the witchcraft era. The subjection of holy reason to hear-says could hardly go further. "Beware of the night wind; be sure and close your windows after dark!" In other words, "Beware of God's free air; be sure and infect your lungs with the stagnant, azotized, and offensive atmosphere of your bedroom." In other words, "Beware of the rock spring stick to sewage." Is night air injurious? Since the day of creation that air has been breathed with impunity by millions of different animals—tender, delicate creatures, some of them—fawns, lambs, and young birds. The moist night air of the tropical forests is breathed with impunity by our next relatives, the anthropoid apes—the same apes that soon perish with consumption in the close, though generally well-warmed, atmosphere of our northern menageries. Thousands of soldiers, hunters, and lumbermen sleep every night in tents and open sheds without the least injurious consequences. Men in the last stage of consumption have recovered by adopting a semi-savage mode of life, and camping outdoors in all but the stormiest nights. Is it the draught you fear or the contrast of temperature? Blacksmiths and railroad conductors seem to thrive under such influences.—*Good Health.*

The Universal Increase of Insanity.—Why is it that the ratio of insanity in all civilized countries notwithstanding the increased asylum accommodations and the vastly improved treatment, is steadily increasing, having gone up in England since 1862 from 1.81 to 3.11 per cent, and even more than that in this country. Will statesmen and philanthropists turn for a time from the well beaten road of ordinary political measures and charities, to point out a remedy and dam at the source this ever broadening and deepening stream, whose tributaries are in almost every town and hamlet in the land. The causes are so many and so varied, from heredity down the long line of worries, of alcoholic and narcotic poisoning, that the wisest statesmanship and the most profound study of psychology and mental science must be brought into action to meet intelligibly abuses and habits so closely entertwined with almost every phase of social and industrial life. As there can be no one specific, the remedy must be general, gradual and constant. It has been well said that the manifes-

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tations of insanity are nothing further than distorted or diseased manifestations of mental activities, which by themselves are present in every man. These mental activities, the outgrowth of physiological conditions, to a certain extent hereditary, are increased or distorted by different influences. An influence which to one would be comparatively harmless, to another would be productive of disastrous results. The education of the will and the training of the intellect and sentiment are the main factors in building up a harmonious and healthy physical and mental organization, and through these channels must come these healing influences which will calm the turbulent passions which bring those influences which excite unhealthy mental activities under the control of reason.—N. Y. *Med. Times.*

Clinical Instruction in Infectious Diseases.—The "Local Authority" for Glasgow, under the Public Health Act relating to Scotland, addressed, in 1890, a communication to the General Medical Council for Great Britain, urging the necessity of the clinical instruction of students in the characteristics of the various infectious diseases. The Council, at its summer session in June, passed this resolution: "That no qualification in medicine ought to be granted without evidence of clinical instruction in infectious diseases." It seems to us that it would be an excellent plan if the licensing bodies of those States of the Union that have laws regulating the practice of medicine should refuse to license graduates of institutions that fail to provide a course of clinical instruction in contagious and infectious diseases.

At one of the meetings of the New York Academy of Medicine last spring, Dr. John Winters Brannan called attention to this lamentable deficiency in the curriculum of our medical colleges, and urged the adoption of some plan by the boards of health of the large cities by which hospitals for contagious diseases should be open for the clinical instruction of students. Dr. Brannan's paper advocated the adoption of some plan, rather than any specific plan, his idea being that the boards of health would be strengthened in their conflict with contagious diseases by having practitioners in their respective communities that were conversant with the earlier and with the paradoxical phases of those diseases. Each of the speakers on Dr. Brannan's paper acknowledged that he had begun his professional career with nothing more than book knowledge of most of those diseases.

Our college faculties are fond of laying great stress on the facility their students acquire in recognizing rare diseases that a few men may see once or twice in a lifetime, and on their acquaintance with the technique of operations that not more than a small percentage of these graduates will ever be called upon to perform. But the contagious diseases, that cause about ten per cent of the mortality in our cities, are only familiar to them through word pictures.

We have heard that the board of health of New York city has had under consideration a plan by which such instruction may be afforded, and it is to be hoped that it will not be long before the graduates of New York medical colleges are as familiar with the appearance of any of the contagious diseases as they are with that of pneumonia or heart disease.—N. Y. *Med. Journ.*

The Indian Medico-Chirurgical Review.—A new journal thus entitled, published in Bombay, has appeared as an organ of the native surgeons and physicians of western and Northern India. It is published monthly under the editorship of N. H. Choksy, M.D.

The Public Health Section of the Academy of Medicine. — Mr. Ernest Hart, the editor of the *British Medical Journal*, read a paper before the Section in Public Health, Legal Medicine, and Medical and Vital Statistics of the New York Academy of Medicine on Tuesday evening, October 10. His subject was Quarantine and Medical Inspection; a Summary of European Experience.

The Philadelphia Polyclinic will devote a special week, beginning on October 30, to the subject of cataract. Cataract operations will be done, both extractions with iridectomy and simple extraction, and the whole subject of etiology, diagnosis, the dressing and after-treatment, complications, etc., will be gone over. In additions to clinics, demonstrations, and practice of operations on the eyes of lower animals, there will be a series of "conferences" participated in by the professors and the members of the class.

An Accidental Death from Ammonia. — At New Brunswick, New Jersey, an unusual cause of death has been announced as the result of the careless administration of aqua ammoniæ to a person in a fainting condition. A bottle containing several ounces of the drug was held to the patient's nose in such a way that the liquid was spilled. Some of it found its way into the throat and air passages. The throat and lungs were profoundly irritated by the ammonia, and the woman died in great pain. She had only recently recovered from an attack of pneumonia.

A Treatise on Ophthalmology for the General Practitioner. Second edition, revised and enlarged, with 140 illustrations, by Adolph Alt, M.D. 8vo., cloth, pp. 346, mailed postpaid to any address on recipt of price, $3.50. J. H. Chambers & Co., Publishers, 914 Locust Street. St. Louis, Mo. 1893.

We are always pleased to welcome works such as this, which, as its title indicates, is intended to familiarize the general practitioner with a class of diseases which invariably give a great deal of trouble and of which it is very necessary for him to have some practical knowledge. The book carries out the ob ects of the author very perfectly and as work of reference for the practitioner will prove very valuable.—Nashville *Jour. of Med. and Surg.*

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Dr E. S. Ferris, of Hamilton, O., under date of September 19, 1893, writes: "I have found Antikamnia an excellent remedy in all forms of neuralgia."

Dr. D. Mason, Trenton, Florida: "I am well pleased with Andunea; am using it myself, being afflicted with cancer, and find it relieves quicker than anything I ever tried."

Honest Goods Never Change: like the advertisement of the Geneso Road Carts, in this number, which is always the same. They are advertised to physicians only at one price. They are sold on a small percentage of profit, hence one price to all.

D. R. Greenlee, M.D., St. Paul, Minn., writes: "I am pleased with the action of your uterine tonic called Dioviburnia. It has relieved a number of cases of dysmenorrhea and carried two cases through to full term, who had a number of abortions previously, two nice babies, happy parents.

D. C. Bussey, M.D., Luella, Texas: "I have made direct application with powdered Andunea to a chronic ulcer, situated upon the leg, which relieved the pain very readily, and also seems to have great curative properties; the ulcer is readily yielding to the treatment. I have also used Andunea in la grippe, besides malarial and typhoid fevers, with satisfactory results.

Sander Son's Eucalypton Extract (Eucalyptol).—Whenever mention is made of "Oil of Eucalyptus" we beg you to bear in mind that such reference applies to our preparation, styled for distinction, "Eucalypti Extract (Eucalyptol)." To avoid disappointment, we would suggest to specify, when prescribing, our manufacture. Samples gratis through Dr. Sanders, Dillon, Iowa. Meyer Bros. Drug Co., St Louis.

Threatened Abortion, It Acts Almost "Like Magic."—S. H. Weatherford, M.D., Georgetown, Texas, writes: "It is with great pleasure I do you justice to state publicly, that I have recently used your Dioviburnia compound with much satisfaction. In dysmenorrhea I think it has no superior, if an equal. I have given it in several cases of amenorrhea with most excellent results, and owing to its antispasmodic effects, I prescribe it almost exclusively in cases of threatened abortion; in such cases it acts almost like magic.

The Nervous System is most complicated and the experienced physician is often puzzled when it becomes disordered to know what causes the disturbance. When the brain is the offending organ, exhibited by diminished power of attention, faulty memory, incapacity for mental work, frequent but irregular insomnia with depression of spirits, and irritability of temper the Elixir Six Bromides (W. G.'s) is of great therapeutic value and when attended with feeble digestion and debility the Elixir Six Hypophosphites (W. G.'s) is a valuable adjunct remedy.

Hysteria.—She manifestations of hysteria are so infinite in number that Tanner has well said: "Hysteria simulates almost every known disease." It so often exists without any pathological lesion and persists after cure of the lesion that the practitioner has no resource but the well-known antispasmodics, anodynes and nerve tonics, which should only be taken at his direction, and which alone in many cases intervene to save the sufferer from the too common resort to opiates. Here Neurosine not only gives prompt relief but offers the best means of cure.

Neuralgia.—The varieties of neuralgia are almost as numerous as the nerves of the body. Wherever there is a nerve there is a pain. In almost every form Neurosine will be found to give prompt relief and if persevered with in the interim of the attack the splendid effects of the bromide of zinc and Cannabis Indica as permanent nerve tonics, and the other bromides as alteratives, may be confidently expected.

Sennine in Gener Surgery.—Scarcely anything further need be said than that a saturated solution of Sennine in boiling water affords the very best preparation with which to thoroughly cleanse the hands and all instruments to be used in operations. The same solution can be sprayed throughout the room and upon the parts to be operated on. Subsequently the wound can be treated in the same way and thus rendered entirely aseptic. Or, Sennine can be freely dusted from the perforated container directly upon the parts. The subsequent dressing can conform to the particular preferences of the surgeon.

Our Prize Essay.—By R. A. Vaughan, M.D., St. Louis.

DON'T PRESCRIBE CODLIVER GLYCERINE.

Because:

1st. It is so pleasant to the taste, that your patients may think they are not taking medicine; and may even forget that you ever prescribed for them and fail to pay their bills. You should give them something nasty and they will never forget you.

2nd. Its digestive powers so increase the appetite that they will soon be using pork and beans instead of your medicines. And the butcher and grocer will get the money which otherwise belongs to the doctor and undertaker.

3rd. Its alterative properties infuses new blood and life and your patients take a bright view of the future and cease to be gloomy and sad. This you should prevent, for pain is a great educator.

4th. Codliver Glycerine mixes unformly in all prescriptions; which proves that it is best to use codliver oil, its emulsions, or some other indigestible stuff that will not mix, so that your patient will have two kinds of medicine to take, and will realize that life is not an empty dream, nor one continuous round of pleasure.

5th. Codliver Glycerine is borne by the most delicate children, increasing their digestive powers; which shows it should not be used with them, because it costs money to raise children with strong digestive powers.

6th. Codliver Glycerine is valuable in the convalescent period from all diseases. Don't use it then for your patients may get too strong for other diseases to attack them, and thus cheat yourself out of continued fees,

7th. Codliver Glycerine is valuable in wasting diseases. You should be careful how you prescribe it or there may be a sharp advance in the "living skeleton" market.

8th. Codliver Glycerine is valuable in all lung and bronchial diseases. These cases will live a long time on nasty and indigestible stuff and if you cure them quickly on Codliver Glycerine for small fees, they may die of accident and you will loose big fees.

9th. Codliver Glycerine is valuable in rickets and all strumous diseases of the bones; but should not be used for you are liable to cure so many children as to produce a scarcity of dime-museum freaks.

10th. Codliver Glycerine exerts its effects on the system at once, while it takes the oil and emulsions from four to six weeks to produce any effect. You should let your patients suffer as long as possible and get a large fee, and if they should happen to get well they will think you are a stunner. —Eureka Springs *Medical Journal.*

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ORIGINAL ARTICLES

Heredity—Pre-Natal and Co-Natal Influences.

BY C. L. CARTER, M.D., WARRENSBURG, MO.

Heredity is, in our organism, the prime factor in determining morphological forms and mental impress. Subsidary, but potential, are environment, pre natal and co-natal influences. It is a law in biology that parental peculiarities are impressed upon the offspring; thus, species are formed and maintained, modified, however, by environment and condition and thus, too, are individual peculiarities of parents propagated.

These are fundamental principles in physiology, as manifested by every phenomenon in organic life, and confirmed by the known facts in evolution.

Sexual selection and habit have almost denuded man of the coat of hair common to mammals; pressure and friction are factors in the depilatory process. The donning of clothes, the dorsal decubities, and erect locomotion all favored the depilation; while the least hairy were the greatest favorites in mating, so that sexual selection came in as a secondary but potential factor.

The inheritance of consumption, red hair, and black eyes are so familiar that we are too much disposed to limit heredity to these, or at most to too narrow limits.

The usual characteristics of species—individual peculiarities of body or mind, are alike inherited Congenital peculiarities of parents are more likely to be inherited by their offspring than accidental changes which occur after birth of the parent, but these are often inherited. I know a lady in this city who from accidental cause has ptosis of the right eye. She has a son who was born with the same abnormality of the right eye. About a century ago a family in Massachusetts reared a pet sheep, which was abnormal in having very short legs. The sheep was bred to a mate having legs shorter than sheep usually have, and the offspring had the peculiarity of the pet parent and a new species of sheep was developed noted for short legs and called the Ancon sheep. But these were bred to the long legged Merino till the new species was effaced. This going back to the original stock is a natural tendency in all species of animals and vegetables, and is called reversion.

Herrick records a case in his own knowledge of a man who had a large black mole on his back. He was the father of two children by different mothers and each child had a precisely similar mole on the back. I knew a man who had a supernumerary finger. He was the father of five children, two of whom inherited his abnormality.

Color-blindness is generally inherited, and is the heritage of males twenty-five times as often as of females. This is a curious fact out of the range of scientific exegesis. It has been said that the offspring inherit the peculiarities of body and mind of the father oftener than that of the mother. I believe, on the contrary, that either a bright or obtuse intellect is oftener inherited from the mother than from the father.

I believe that heredity has a far wider range of activity than our minds have conceived or our schools have taught. Every diathesis may be inherited, and it is an important medico-legal question whether marriages of diseased persons should be prohibited, and if so where the line should be drawn. Undoubtedly worlds of innocent suffering and myriads of premature deaths could be averted by laws preventing the marriage of those having in them the inherent germs of consumption, epilepsy, or cancer; and what too, of rheumatism, Bright's disease, and cardiac lesions?

Pre-natal and co-natal influences are allied to heredity in this, that they impress offspring potentially and even in a more direct way. Science and observation warrant the conclusion that if a woman have coition previous to conception or during gestation; but conceives by another man, the child may in some peculiarity be impressed by the first man. Several examples are recorded where one of the parents was partially intoxicated by alcohol at time of conception and the child came demented. Any strong and absorbing mental impression at time of conception may impress the mind of the child for weal or woe. "Mother's mark" is a familiar example of impression made on the child in utero through impressions made on the mother. Less noticeable but just as real, is the effect of the mother's good or bad temper upon the child in utero. A sweet temper and contented disposition on the part of the mother impresses the child to

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the same disposition; and the reverse for the mother, then the reverse for the child.

I want to say finally, that the laws of biology are just as potent and mandatory in the propagation of our race, as are the physical forces that move the planets in their orbits.

As physicians we have grave responsibilities upon us, and all along the line of life, and most especially on the subject now under consideration. I have yet a few more facts to notice and I have done:

I want to say that we not only inherit multiform dis eases and diatheses, but we inherit weakness of constitution in some definite direction, or feebleness of resistance to some kind or forms of disease. Thus some individuals and families have no inherent vital force in them to resist the poison of scarlatina; others are much a prey to diphtheria, while other families at the same time, and just across the street it may be, have comparatively great immunity from the contagion: so they may not be attacked under any degree of exposure, or if they are attacked, have such inherent resistance against the disease that it will run a mild course; while in the former cases under most desirable hygienic surroundings, the disease displays its most fateful character.

These are idiosyncrasies of which there are many, which by heredity run in families. Hereditary disease or influence often jumps one or more generations, and reappears apparently after all influence of that kind had been lost or forgotten. Thus, consumption often attacks after having made no manifestation in a family for several generations, and so of other inherent diseases. Hereditary traits of character do likewise. A thief may pop out in a family noted for uprightness and honesty. A wise man sometimes comes from a family of mediocres. These jumps of hereditary traits exemplify what we call atavism.

Unconscious Delivery.—Le Blond (*Jour. de Med. de Paris*), related in July a remarkable case before the Medico-legal Society of Paris. A woman aged 27, who had been seduced and deserted, was seized with slight colicky pain, but continued to work. In the course of the following night she was attacked with still more severe pain. Thinking that an action of the bowels would give relief, she sat upon her chamber utensil; on straining a live child was born. This alarmed her greatly, but she cut the cord with scissors, wrapped the infant in a cloth and walked downstairs telling the people in the house, in fear and trembling, what had happened. Violent flooding set in. The cord had not been tied. Early in the morning Le Blond saw the patient, and fonnd the placenta still in the vagina. He extracted it. The mother and child did very well. Had the child died the mother would have been very strongly suspected of murder, especially if she had attempted to defecate in a public privy, in which case the child would almost inevitably have been killed,—*Br. Med. Jour.*

EDITORIALS

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

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Bloodchanges in Syphilis.

Paleness of the skin and mucous membranes is a symptom of syphilis which particularly occurs just before the eruption makes its appearance and often remains after the disappearance of the clinical symptoms of syphilis, sometimes even for many years. Many investigators have been at work to determine the changes in the blood due to syphilis and a valuable contribution to this subject has been furnished by Neumann and Konried, who have published the result of their investigations in the *Wiener Klinische Wochenschrift.* The results of these researches are the following:

1. During the primary stage the amount of hemoglobin in the blood is diminished from 15 to 30 per cent, and remains so during this stage. Upon antisyphilitic treatment the percentage of hemoglobin gradually returns to the normal.

2. Old cases of secondary syphilis that have not undergone treatment show almost constantly a decrease in the amount of hemoglobin, the latter varying between 45 and 75 per cent. The effect of antisyphilitic treatment in these cases is also very plain and the amount of hemoglobin may return to the normal.

3. In tertiary syphilis the low percentage of hemoglobin is a characteristic symptom; of all cases examined there was only one, which showed a normal

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percentage of hemoglobin. Here also an increase of hemoglobin was observed upon treatment but only in a small degree.

4. With regard to the number of red blood-corpuscles no diminution takes place in the primary stage in contra-distinction to the behavior of hemoglobin; with the development of constitutional syphilis, however, they decrease in number to one third of the normal. Excessive doses of mercury also diminish their number.

5. Cases of secondary syphilis that have not undergone antisyphilitic treatment show coustantly a decrease of red blood-corpuscles up to one-third of the normal. Treatment re-establishes the number during the same stage, differing in this again from the behavior of the hemoglobin.

From these observations it appears that in the examination of the blood we are furnished with a valuable additional means of gauging the result of antisyphilitic treatment.

Uric Acid In the Blood.

Dr. John Ferguson writes in the *Dominion Medical Monthly*: The most extensive investigations show without a shadow of doubt that amount of urea formed in the system daily, and eliminated from it, varies with the diet and the healthy condition of the emunctories. It will be readily granted that 1000 days is a fairly lengthy trial. Making use of Charteris' ureameter, and testing my own urine for the above period, I found that the total amount of urea eliminated was 363,458 grains, or a daily elimination of 363 grains. During the same daily tests, using Haycraft's and other methods, I found that the daily elimination of uric acid was eleven grains. On many days the collection, for the entire twenty-four hours, was used; on other days, the calculation was made from samples, and estimated for the entire day. Knowing the average amount of urine voided daily, I found that the days on which I estimated from samples corresponded very closely with those when I had used the entire day's collection. The results may be taken, therefore, as practically accurate.

The researches of several careful observers, including Berlioz, Lecanu, Duckworth, Garrod, Haig, Haycraft, Landois, Heidenhain, and myself, prove beyond any doubt that the formation of uric acid is in the ratio of one to thirty-three of urea. Now note carefully that I say formation, and not elimination. The formation of uric acid to urea may go on in the proportion of one to thirty-three, and the elimination not hold this ratio. This may be caused by a number of conditions that hold back in the system some of the daily formation of the uric acid. This quantity, held back, is stored up within the system.

If, for any given period, the elimination of uric acid stands to the urea as one to forty, there is a retention of some of the uric acid formed. If, on the other hand, the uric acid eliminated in any period should be, to the urea, one to twenty, there is an elimination going on in excess of the daily formation; and this excess must come from what has already been stored up in the system. The most careful researches all go to show that the formation of these two important urinary products is in the standard just given, of one to thirty-three. This important fact must be held firmly in mind.

Now, when the nature of the foods and drinks used are of a healthful nature, the formation and elimination alike hold the above ratio. In such a condition there could not be a storage of uric acid in the system. If, however, the person used an unduly large amount of nitrogenous food, or drank freely of acid ale or wine, the acidity of the urine is increased, and, per contra, the alkalinity of the blood is lessened. But it is well known now that when the alkalinity of the blood is reduced its solvent power over uric acid is impaired. This product will not, therefore, be held in such perfect solution, and some of it, under these conditions, is deposited in different organs of the body, as the liver, spleen, etc.

On the other hand, if the person should use a vegetable diet freely, and avoid the acid drinks above named the urine is lowered in acidity, or may become actually alkaline. Landois and Heidenhain have worked this out with great care. When the acidity of the urine decreases, the alkalinity of the blood increases.

But Roberts, Haig, Lange, and myself have shown that when the alkalinity of the blood is increased, its solvent power over uric acid is greatly increased. If there should be a quantity of uric acid stored up in the system, and the alkalescence of the blood increased, it would hold in solution the daily formation of the acid; and, in addition, dissolve out of its hiding places some that had already been formed. During such a condition the elimination would be in excess of the formation. The ratio of the uric acid to the urea might be increased to as much as one to twenty. I had one case where, for a time, it stood at one to thirteen. Thus a vegetable diet often increases the elimination of uric acid by increasing the alkalescence of the blood, and thus washing out the storehouses.

Grant that a man retains one grain of uric acid daily. In three years the amount stored away in his system would be 1095 grains, or more than two ounces. This would be quite enough to do serious damage. The retention in many cases is much greater than the above.

I have just mentioned that a vegetable diet decreases the acidity of the urine and increases the alkalinity of the blood. Fever does the same thing. Suppose, then, that a person had a large quantity of the urates in his blood, and the alkalinity of the blood was above normal. At such a juncture he is exposed to wet and cold. As a result, he becomes very feverish, and the alkalescence of his blood falls. It can no longer hold in solution the urates it contains. They are precipitated anywhere and everywhere—around the joints, in the muscles, in the pericardium or endocardium, in the cebral meninges. Thus we have an attack of inflammatory rheumatism in its varied forms. Just think of your cold bath and alkalies! Use both, and presto the

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reaction of the blood begins to become more alkaline. The uric acid is taken up, gets back into the blood again, and, by free diuresis and diaphoresis, it is washed out of the system.

If a person has a large amount of uric acid stored up in the system and begins the use of alkalies, and puts himself on a vegetable diet, the acid is dissolved and comes into free circulation in the blood. The effect of this is to make the person feel very ill. A large amount of uric acid in the blood deranges the circulation seriously, and gives rise to severe headache and mental depression. This accounts for the violent headaches that so many experience in connection with a uric acid wave. The arterioles are contracted, and the circulation through the brain is decidedly deranged. Certain drugs and acid drinks will throw down the uric acid out of the blood, but at the expense of a recurrence of the rheumatic pains in the joints.

Prof. Lange has given a great deal of study to the important fact that suicides prevail in the hot months. Indeed, July has been called the month of suicides. This can to a great extent, be explained by the fact that the blood at this season of the year is in the condition of uric acidemia. The arterioles are contracted, and the cerebral circulation not free. Mental depression follows. In these facts we have an explanation for the fact that suicides are more frequent during the hot months than at any other season of the year.

In various papers during the past four years I have shown the relationship existing between uric acid in the blood and epilepsy, migraine neuralgia, uremic convulsions, and some allied conditions. These papers have appeared at different times in the *Medical News*, *Therapeutic Gazette, and Alienist and Neurologist.* So far as these observations go, they all tend to confirm the ground so ably maintained by Haig.

It is a well-known fact that during fasting the alkalinity of the blood falls very considerably. Any uric acid in the blood would tend to be precipitated. This fact was especially emphasized by Sir W. Roberts a short time ago. He made it clear that, to those who are subject to renal calculi, the greatest period of danger is toward morning, when the acid wave sets in. To guard against this acid wave and the formation of renal calculi, he urges that the person should live on a nongouty diet, should take some digestible nourishment a short time before retiring, and some alkali at bed time. For this purpose he recommends a good dose of citrate of potash in a glass of water. All this is thoroughly scientific. The alkali, in these cases, may do good or may do no good, just as it is given at the right time or not.

Those cases of dead hands, where the circulation is almost arrested in the fingers, due to contraction of the arterioles, are due to the uric acid diathesis. This distressing condition is an ally of gout. The great majority of those intense headaches of the migrainous type are nothing other than one of the protean forms of the same condition.

The treatment of these cases is of much interest Drugs will do much to assist, but will not cure. The gouty diathesis is a food diathesis, and can be cured only by regulating the diet. The diet should be largely a nonnitrogenous one. Milk should take the place of meat to a great extent. A vegetable diet, which raises the alkalinity of the blood, is to be advocated. All in dulgene in ales, beers, wines, etc., which lower the alkalinity of the blood, and consequently favor retention within the system of the uric acid compounds, should be prohibited, From what has been said the *raison d'etre* for the water cure, the hot springs cure, the grape cure for chronic rheumatism and gout, will readily be seen.

The action of drugs would require too much time for this paper. One thing I may urge, namely, that the sodium salts are not so good as the potassium salts, for the sodium compounds with uric acid are not so soluble as the potassium compounds with the same agent. Further, it may be mentioned that lithium salts are almost valueless in the treatment of the uric acid diathesis. Potassium salicylate is better than sodium salicylate. The views that rheumatism is due to some nervous condition, to a germ, or to lactic acid, may be dismissed at once, and the treatment consequently directed in proper channels.

The Necessity of a Pure Water Supply in the Conduct of Hospitals and Public Institutions.

In determining the location of hospitals, asylums, reformatories, and penal institutions, the most essential requirement is an adequate supply of clear, pure water (Dr. T. W. Huntington in *Occidental Medical Times*). This is a matter that is paramount to all others. Unfortunate climatic conditions or topographical faults can be met or obviated in most instances by scientific measures; but no locality can be regarded as adapted to such enterprises, if the water supply be known to be deficient in quantity or in any manner contaminated or subject to contamination.

The general subject of the relation of the water supply to public health, and its bearing upon endemic and epidemic outbreaks of disease, has been often and thoroughly canvassed. Recent investigations have proven beyond doubt that an isolated case of typhoid fever or cholera has, by impregnation of watercourses, imperilled the lives of communities. Hence in institutions devoted to the wellbeing of large numbers of inmates, all subject to the same conditions and exposures it is apparent that the utmost caution should be exercised in securing absolute immunity from any disease breeding element.

Nor is it alone from the standpoint of drinking and cooking water that this source of possible danger should be carefully scrutinized. The risks to human life may be in plumbing choked by gradual deposits of filth in discharge pipes, in the implantation of germs in the

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crevices of floors, in bedding ond clothing, and exposure in bathing.

Upon no class of persons are the exactions for absolutely pure water more imperative than the modern surgeon in the treatment of open wounds. Asepticity, which means the highest possible standard of cleanliness, is the first and most positive requirement in dealing with this class of work, and to bring in contact with exposed tissues a fluid that is known to contain a certain proportion of organic matter, is little short of criminal. While it is true that by careful manipulation impure water may be rendered inoccuous, yet how much more perfect immunity from danger there is in absence of pollution in the original material.

The Effects of Diuretin.—Dr. Sabachnikoff studied the action of diuertin on animals in Prof. Pavloff's laboratory of pharmacology. He introduced the drug into the lymph-hearts of frogs, and diretly into the veine in rabbits, dogs, and cats. The resu are summed up as follows:

1. Diuretin, almost immediately after introduction into the blood, produces marked diuresis in rabbits and young dogs.

2. Diuretin has no diuretic effect on adult dogs. It even causes a diminution of urine.

3. This diminution of secretion disappears on administering narcotic doses of chloral or morphine; and after section of the sympathetic, or of the pneumogastric, or, again, after section of the cerebral hemispheres.

4. Diuretin acts chiefly on the renal epithelium.

5. Contrary to what has been pointed out by Schroder, diuretin acts as a poison on warm-blooded animals, and, above all, on the nervous system. In no matter what doses given, it excites the brain.

6. Under the influence of diuretin, the heart beats become more frequent, and in the larger doses the beats became irregular. Death takes place through its action on the heart and respiratory organs.

7. The fatal dose of diuretin is seventy centigrams per kilo. of animal's weight. Of course, there are individual idiosyncrasies.

8. Non-toxic doses of diuretin produce a temporary rise of temperatnre; a toxic doses produces a marked rise of temperature that persists until death.

9. Diuretin has undoubtly an effect on the muscular system of both warm and cold-blooded animals.

10. In large doses, diuretin brings on vomiting and frequent liquid stools.

11. Diuretin has a sialagogue action.

12. Diuretin is not cumulative.

13. Diuretin has an action on cardiac muscle analogous to the action of the accelerator nerve.

14. In all doses, diuretin diminishes arterial pressure. —*Revue Chirur; Can. Prac.*

ABSTRACTS

What are the Indications for Abdominal Section in Intra-Pelvic Hemorrage.—M. Rosenwasser, M.D., Cleveland, O. (*Amer. Gynecol. Journ.*) says: Sufficient clinical evidence has now accumulated to demonstrate that a differential diagnosis between extra and intra peritoneal hematocele cannot be made. It is therefore suggested to divide intra-pelvic hemorrhage into free and circumscribed. We control the former by abdominal section, how shall we manage the latter? Ruptured tubal pregnancy has, in most cases, been found to be the cause of both vaireties; hence the tendency of those entertaining advanced views to treat all intra-pelvic hemorrhages alike—by section—as the shortest and safest way out of a serions dilemma. The fact that circumscribed pelvic hemorrhage is quite common, and that cases often recover without operation, and that it is quite possible to distinguish and separate cases requiring operation from those likely to get well by rest alone, makes the author doubt the propriety of promiscuously throwing all into one group, subject to abdominal section. Only cases giving evidence of infection, or of continued growth of tumor, or of interferense of vital functions by pressure, or of secondary rupture, are properly subject to operative treatment.

A table of sixteen consecutive cases of circumscribed pelvic hemorrhage is submitted and analyzed to substantiate the views expressed. There was a definite indication for operative treatment in but six cases. Of the remainder, nine recovered by rest, and one was operated at her own urgent request. Her recovery was uneventful, but she now has a ventral hernia. Guided by his own experience, the writer would advocate vigilant delay, until the operation is definitely indicated.

The so called advantages of early section lose all value when operation is unnecessary.

First,as to control of hemorrhage.—Section is uncalled for when hemorrhage has ceased and the mass is shrinking. Final absorption is effected by rest in bed. Secondary rupture is rare, and the dauger arising therefrom is offest by the danger incident to unnecessary operation.

Second, as to removal of debris.—As nature successfully disposes of the debris in at least sixty per cent of these cases, only the minority will require operation in the event of suppuration or of pressure symptoms.

Third, as to the removal of ruptured tube.—The appendages, in cases recovering without operation, and in those treated by vaginal inision, are not touched, and even in cases treated by abdominal section, they are left undisturded—no harm following.

Fourth, as to safe and speedy recovery.—Though the risk of death by operation be but a fraction, the danger of chronic invalidism from ventral hernia, intestinal adhesions, and, rarely, from fecal fistula, ought to be sufficient to deter one from operating for the sake of speedy

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recovery. The writer offers the following conclusions:

1. Intra-pelvic hemorrhage may be free into the peritoneal cavity, or primarily or secondarily circumscribed by true false membranes.

2. Though nearly always due to ruptured ectopic pregnancy, the same surgical principles underlying the treatment of other hemorrhage are applicable in intra-pelvic hemorrhage.

3. Such treatment must, therefore vary according to the conditions, dependent primarily on the hemorrhage, and secondarily on the original cause of the hemorrhage; hence

4. To prevent free intra-pelvic hemorrhage, abdominal section is indicated in all cases of presumably recognized, unruptured tubal pregnancy, either as prophylactic, or for the purpose of removing pathological conditions not otherwise curable.

5. In all cases of free intra-pelvic hemorrhage, from whatever cause, early and immediate section is the only safe means of averting a fatal termination.

6. In circumscribed intra-pelvic hemorrhage, section is indicated for removal of increasing blood clots and debris, whether due to recurring bleeding or continued growth of fetus.

7. In circumscribed intra-pelvic hemorrhage, section is necessary whenever the symptoms indicate decomposition of the blood-clot.

8. Section is also indicated whenever the pressure of the circumscribed blood-mass produces obstruction of the bowel.

Experimental Researches on the Comparative Absorbing Powers of Stomach and Rectum.—At a recent meeting of the Societe de Therapeutique, reported in the *Bulletin General*, M. Main presented, on behalf of himself and M. Lemanski, the result of comparative investigations made, under M. Dujardin-Beaumetz, on the absorption of certain medicaments by the stomach and by the rectum. "One of us," he states, "being pressed for time, we instituted our experiments only with salicylate of sodium, salol, antipyrin, iodide of potassium, terebinthine, and methylene blue. After having determined the integrity of the subjects under observation, we first administered by the mouth a quantity of the medicament, the dose being adjusted with great precision. Two or three days after every trace of the medicament had disappeared from the urine, we placed in the rectum of the same subject a hollow Kugler suppository containing the same dose of the product."

Taken by the mouth, the salicylate of soda manifested itself in the urine at the end of thirty-five minutes; and at the end of twenty-five minutes when taken by the rectum.

We were enabled to determine the passage of antipyrin forty minutes after stomachal indigestion, and thirty minutes after rectal absorption.

We found iodide of potash in the saliva at the end of 15 minutes, giving the medicament by the mouth; and at the end of 10 minutes, giving it by the rectum. Here we must observe that the rectal administration of iodide of potash is extremely painful, and the subject of experiment is almost at once forced to expel the suppository. Accordingly, less than one gramme (the adopted dose) was absorded by the rectum.

Methylene blue imparted a coloration to the urine within forty minutes after oral administration, and at the end of an hour and fifteen minutes when given per rectum.

Salol, taken by the the stomach, manifested itself at the end of thirty minutes; taken by the rectum alone, after the lapse of four hours. This was to be anticipated, taking it for granted that the salol does not split up in the digestive tube, save under the alkaline influence of the pancreatic juice.

As for the terebinthine, it required forty-five minutes to communicate the odor of violets to the urine when administered by the stomach. Given by the rectum it never gave evidence of its characteristic odor.

"One of us," adds M. Main, "had attempted some time previously the employment of suppositories of santal. This product was not absorbed, and produced only an intense rectitis."

From these experiments it follows that all substances may in general be administered by the rectum. Certain products, however, such as the terebinthine and the santal, would not be absorbed.

The speaker added that amongst the products directly soluble, which had been tested, the greater number pass into the circulation more quickly by the rectum than by the mouth. This is a new confirmation of the researches of Demarquay.

In the discussion which followed, M. Patein observed that salol decomposes, not only under the influence of the pancreatic juice, but also in the circulation.

M. Main: We simply wished to emphasize the fact that the decomposition of the salol in the rectum must proceed less rapidly, the secretions not being alkaline at the lower end of the digestive tube.

M. Catillon: This question of the alkalinity or acidity of the rectum has been controverted. In the course of investigations which I made at the laboratory of Vulpian on alimentation per rectum— investigations which have been here discussed and which have solved this question—I was led to look into this phenomenon, and very often I found an acid reaction in the rectum.

M. Constantin Paul: I believe the physiological rectum should be alkaline, but I have often determined its acidity in children suffering from green diarrhea.—*Med. Age.*

Oxygen and Alcohol for Septicemia.—At the last meeting of the American Gynecological Society, Dr. Currier of New York, read a paper in which he advanced the idea that septicemia is an acute toxit mycosis of the blood, resulting from the decomposition of substances in the intestines and the absorption of the toxic products, the absorption of decomposed material

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from the genital canal after labor, or the absorption of toxic substances through the serous surfaces after an operation on the abdominal or pelvic organ. If recovery occurs, it is obtained by means of phagocytosis which disposes of the germs, and by the oxidation and elimination of the toxic products. The author recommends giving highly concentrated liquid food and alcohol and the administering of oxygen.

No fault can be found with the doctor's theory concerning the nature of the disease, nor the importance of sustaining the patient by easily assimilated food, and his suggestion respecting the use of oxygen is especially valuable. We have used this remedy in cases of septicemia with wonderful effect. The cyanotic appearances observed in case of intense systemic poisoning, we have seen disappear as if by magic as the result of the inhalation of oxygen by means of a mask placed on the face, the oxygen being received from a large distended rubber bag. It is impossible to understand, however, by what theory, consistent with the result of modern physiological investigation. Doctor Currier administers alcohol along with oxygen. It is well known that alcohol diminishes the power of the red corpuscles to transmit oxygen to the tissues, since it has a powerful affinity for hemoglobin, combining with it as soon as it enters the blood and destroying its ability to absorb oxygen. We most heartily recommend oxygen in septicemia and other allied conditions having demonstrated its value by personal experience; but we must with equal emphasis con demn the use of alcohol in such cases. This drug itself a toxic agent, and not a food, as is supposed. Attention was called to this fact by Dr. Hart, the eminent editor of the *Brit. Med. Journ.*, in his recent address on cholera at Milwaukee. His suggestion was that alcohol should never be used in cholera, since it s a toxic product, and closely allied to the ptomaines with which the system is struggling, and hence could be only a detrim ent. The use of alcohol in cases of toxemia can be condemned only in the light of our modern knowledge respecting the relation of toxic substances to the human body. Oxygen if nature's sovereign remedy for these cases. It is only through its agency that recovery is possible. But nothing could be more inconsistent, and we can scarcely think of anything more detrimental to the patient, than the use of alcohol, since the drug not only introduces additional poison requiring oxidation into a system already loaded with such poisons, but lessens the power of the body to absorb and distribute the only agent by which the oxidation and destruction of the poison can be effected.

In a discussion during the late meeting of the Amer ican Med Asso. at Milwaukee, it was observed that many physicians who have had a scientific training are convinced that alcohol is of no service in many maladies in which it has been supposed to be indispensable.—*Mod. Med.*

Pernicious Uterus Hemorrhage.—E. A. Wood, M.D., of Syracuse, N. Y., says: I was called to treat a chronic case of constant and pernicious hemorrhage from the uterus due to debility of this organ. It had continually resisted treatment by several other physicians, but responded to "Dioviburnia" in twenty-four hours. The hemorrhage stopped at once and she proceeded to immediately recover, and has never had a return of it. She had taken fluid extract of ergot until she became so weak from its depressing action on the heart that she was hardly able to walk. She had also been treated locally with electricity until the mucous membrane of the uterus had been cauterized and nearly destroyed. This is but one case out of many which I have successfully treated with "Dioviburnia." When I told her former physician the remedy I had used he would not believe me and insisted that I had used something else in connection with this product. The main trouble in their treatment of the case was the mistake of diagnosing the cause of the hemorrhage. Some physicians would not be guilty of using a semi-proprietary preparation deeming it beneath their professional dignity to do so. Well they are losing cases every day, while many of my professional brethren are up to the time and are using anything new that is better than the old are gaining new patients and increasing reputation. I am satisfied that "Dioviburnia" is the best preparation on the market for the class of cases for which it is indicated. I have always got the best and most uniform results from its use.—*Exchange.*

The Curative and Preventive Action of Mercury and Iodide of Potassium—Mauriac (*Journ. de Med. et de C. Prat.*) holds that the two drugs most powerful in tho treatment of syphilis do not realize the conditions essential to entitle them to be named as specifics though they are incontestibly superior to all other remedies which have been employed against syphilis.

Their curative action is often wonderful, and can usually be implicitly relied upon when the drugs are given in accordance with the recognized clinical manifestations of the disease. In their preventive action, however, they are less satisfactory. This action is feeble, superficial, and transitory, since outbreaks of the disease seem to be prevented not at all by the prophylactic treatment. There is only one condition under which this preventive action has proven satisfactory—that is, when administration of the specifice prevents hereditary transmission of the disease from the husband or wife free from apparent manifestations. Daily experience demonstrates that mercury neutralizes the latent infection of the spermatozoa of the sperm, the ovule, and the blood which occasions hereditary syphilis. This, again, however, seems to be transitory, since after treatment and apparent cure hereditary transmission may appear latent and the parents themselves may be attacked by recurrences. It cannot be doubted that there is a tendency towards spontaneous cure in syphilis. Since well-directed treatmeat cannot injure the system, since it powerfully aids this tendency to spontaneous evolution,

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Whatever be the degree, form, tendency, or age of syphilis, it should always receive specific treatment. This is especially so when the disease is in its active state; medication should be directed not only against manifestations of the disease, but against the diathesis. Under these circumstances (the absence of symptoms), medication must be conducted somewhat by guess-work. Admitting that the syphilitic diathesis may be present, and admitting the value of the administration of specifics against this diathesis, the logical deduction would be to administer specifics during the entire period of life after syphilis is once acquired. This, however, is an unnecessary extreme, abandoned by its one-time most enthusiastic advocates.

Mauriac belives that the best preventive results from the specifics are to be obtained by pushing their curative action as far as possible each time manifestations appear. The indications under these circumstences are clear and correct, and the dosing should always be full. In the intervals, when no external signs of syphilis are to be found, the mercury can be suspended until new developments require its administration. Mauriac believes that during the periods of latency the administration of a specifice is without good effect, excepting as a means of preventing hereditary syphilis. Here mercury is incontestably the strongest guarantee against the chance of transmission of the disease.—*Therapeutic Gazette.*

Bactericidal Influence of the Blood.—Experiments in this line by Mr. Kionka, published in the *Centralblatt f. Bakteriol. u. Parasitenk.*, xii, and quoted by the journal of the Royal Microscopical Society, covers the ground of those of Christmas in Paris, and are intended to demonstrate that the result obtained by the latter experimentalists may be interpreted in a different manner than he has done. The first experiments made with anthrax and bacilli of typhoid fever demonstrated that sudden changes from one medium to another did not abolish the bactericidal influence. In the second set, anthrax and typhoid bacilli and staphylococcus pyogenus aureus were cultivated in body juices (pleuritic exudate and hydrocele fluid), exposed to the influence of CO_2 after the cultivation media had been heated 55°C., after which the body juices lose their bactericidal influence. The author failed to discover that CO_2 had any power to inhibit the growth of micro-organisms. The 3rd series was made with typhoid bacilli (a), fresh from the human body, and (b) cultivations from artificial media. These two kinds of cultivations were made in various media of human blood serum, in peritoneal and plural exudations, but little difference in the growths was noticed.

"Is the bactericidal property of blood serum a vital phenomenon, or merely a chemical process? Such is the question propounded by Prof. R. Emmerich, Prof. J. Tsubio, Dr. Steinmetz, and Dr. O. Low, and their experiments were directed toward the nature of the microbicidal proteids of serum. To solve the problem, it was necessary to obtain the serum proteids in a pure condition, and then to restore the activity and germicidal property to those proteid substances which had been rendered inert by chemical processes,such as precipitation, drying, etc.

"From a priori considerations this wonld appear an impossible task; but the authors are satisfied with the result of their experiment showing that this difficulty has been overcome. In the first set of experiments serum was precipitated and then dissolved in water, In the second set the serum-albumen was precipitated with alcohol, and dissolved in 4 to 5 per cent potash solution. In the third set the serum-albumen-potash solution was heated to 60°-63° C. They conclude from the results of these expriments that the microbicidal property of blood serum is not a vital phenomenon but is merely a chemical process.

"In the coures of their remarks the authors point out that on occasions in the series where they were dealing with the alkalinized serum heated up to 60°, the number of bacilli was obviously diminished. This is the strongest proof they bring sgainst the position of Buchner, who attributed the bactericidal power of serum to some inherent (vital) property, since heated to 55° this power was lost. That it is due to alkalinity they think is shown by the action being increased by alkalinity and being decreased by acidity, a position very similar to that taken up by Von Fodor some years ago. Von Fodor showed that by augmenting the alkalinity of the blood the bactericidal power was ncreased."—*Mod. Med.*

Microbes and Carnivorous Plants.—Dr.J. N. Tichoutkine made a series of experiments in Prof. Botaline's laboratory at St. Petersburg, and came to the following conclusions:

1. The modifications of albuminoid substances in the juice of carnivorous plants are the result of the vital action of microbes, notably of bacteria.

2. There exists always in the juice of full-grown carnivorous plants microbes which have the property of dissolving albuminoid substances.

3. The commencement of the modification of the albuminoid substances does not coincide with the time of secretion of the juice. The modification commences only when a sufficient number of microbes have developed in the juice.

4. It is through the air that the microbes get to the leaves of the carnivorous plants—not, of course, to the exclusion of other ways.

5. We are to understand by the term carnivorous plant as being a plant that absorbs products elaborated by micro organisms.

6. The part of the process belonging to the plant is the secretion of the juice; this juice then forms a favorable medium for the growth and function of the microbes.—*Revue Chirur.; Can. Prac.*

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MEDICAL SOCIETIES

First Pan-American Medical Congress.—The following papers were read at the meeting of the Pan-Americal Medical Congress (N. Y. *Med. Journ.*) held in Washington, September 5, 6, 7 and 8, 1893:

SECTION IN GENERAL SUEGERY.

SUTURING OF THE BRACHIO CEPHALIC VEIN.

Dr. Marin, of San Pueblo, Mexico, read a paper with this title in which he described that, on the 1st of May, 1889, a man was received at the hospital of the city of Pueblo who had been wounded by a pistol bullet of forty-four caliber. The bullet had made four wounds. It had first entered at the sternal portion of the left sterno-clavicular articulation. The second, an exit wound, was upon the right clavicle at the juncture of the inner and middle thirds. The ball had then entered again at the shoulder three centimetres below the acro mion in the anterior portion, and had made its final exit at its external aspect, one centimetre below the acromion. The left sterno-clavicular articulation had been opened, the ball travelling in the subcutaneous tissues of the anterior part of the neck, afterward backward to the right sterno-clavicular muscle, and again upward to its clavicular insertion. The shoulder wounds were of no importance. The speaker was in attendance upon the man two hours after the accident. The patient was pale, bloodless, in a condition of syncope, with cold sweats, and had a small, frequent pulse. The hemorrhage had been very profuse, and dark blood was pouring from the supraclavicular opening. The flow of the blood was peculiar, as it would stop on inspiration when the man remained quiet; then the loss was insignificant Immediately after any effort the quantity was increased. With the assistance of Dr. Gonzales and Dr. Lopez the speaker had proceeded to an examination of the wounds, and particularly of that wound which bled so much. It was found that the seat of the hemorrhage was deep and probably in the veins at the root of the neck, and that it would be necessary to make a dissection of the sound tissues until the bleeding point was located. The clavicular portion of the muscle was carefully cut above its insertion, when it was ascertained that the bleeding was still deeper. A further layer of muscles was accordingly dissected with the finger and, by carefully sponging, the bleeding point was at length seen. Hemostatic forceps were applied and an attempt was made to pass a ligature, but the effort was unsuccessful. Further examination revealed a longitudinal fissure of the vessel, one centimetre in length, running between the junction of the internal jugular and the subclavian veins, at the point where they form the brachio-cephalic vein. This was the point from which the blood had poured during expiratory efforts. Compression by sponges was made, and a consultation held as to the best course to pursue. Ligature at the site of the bleeding had been tried and had failed, and to ligate all the veins coming to the large trunks was almost impossible. Compression with a gauze tampon was an uncertain and dangerous measure. The speaker had at length resolved to suture this large vein. Fine, slightly curved needles charged with catgut were accordingly introduced after cleansing the parts. The hemorrhage was immediately arrested, and, despite the struggles of the wounded man, no more blood was seen. The sutures were passed through the entire width of the wall of the vessel. Some days subsequently the cut muscle was sutured. Everything progressed well and the man was out again in a month. There had been no resulting thrombus or interrupted venous circulation.

The speaker then reported another case in which he had, in July of this year, operated upon a man fifty years of age for carcinomatous ganglion of the right thigh. It was found that the saphena was involved in the degeneration, and, notwithstanding its previous ligation, extensive bleeding resulted during the process of extirpation. The cruralis was also injured. Hemostatic forceps were applied to the walls of the vein parallel to its direction sufficient to embrace the opening without shutting off the lumen of the vessel. Under the forceps the speaker then passed two catgut mattress sutures with a very fine needle, taking care not to perforate the adjacent artery. All the bleeding was thereby stopped. The patient was getting well when the speaker had left home.

Dr. Marcy thought the paper pointed to a distinct advance in surgery. Very little attention had been paid to the possibility af suturing veins. The mattress suture had been a happy thought. Very little would control hemorrhage in veins, and the use of a continuous Lembert suture, going through the edges of the wound without perforating them, would be effectual.

TWO CASES ILLUSTRATING THE VALUE OF GASTROSTOMY FOR THE EXPLORATION OF THE CARDIAC EXTREMITY OF THE STOMACH.

This was the title of a paper by Dr. Ernest Laplace, of Philadelphia. The author said that the following cases would, he thought, illustrate the benefits to be derived from immediate operation for the relief of symptoms, in spite of the desperate nature of the conditions present. Gastrostomy for the relief of an esophageal stricture had the reputation of being something in the nature of a dernier ressort, and this might possibly be the case when the stricture was of a cancerous nature. Still, owing to the impossibily of a positive diagnosis, it might happen, as in the cases to be cited, that other causes were producing the stricture, which, if the patient could be tided over a crisis, would subside, and the patient be restored to health.

J. H., aged fifty-four years, had been healthy all his life until the time when he began to notice a difficulty in deglutition, which was soon followed by vomiting whenever the attempt was made. Finally he was unable even to swallow water. No stomach tube of any size

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could be introduced past the stricture, which was diagnosticated as being situated at the cardiac extremity of the stomach. No cancerous history and no possible clew could be obtained as to the nature of the obstruction. On entering the hospital the patient was in a starved condition, having been fed by enemata for three months. Although he was very weak and almost exhausted, it was determined to perform a gastrostomy. An incision was made on the right side, three inches in length, parallel to the costal arch, starting about half an inch from the ensiform cartilage. On opening the peritoneum, a hard, glistening mass was seen, and this was recognized as the stomach only by its attachment to the omentum. This mass was accordingly sutured to the abdominal wall by twelve silk sutures, leaving an exposed surface of the stomach of about three quarters of an inch diameter. On the third day this was punctured with the thermo-cautery, and a sound was passed into the stomach, which was found to be quite thick and strongly contracted. The patient was fed through this opening with peptonized milk, custards, and so forth. In a few days the stomach was much dilated, and then the patient, craving food, was allowed to chew what he was given to eat, and the mass was then introduced into the stomach through the opening. No difficulty was found in withholding the contents of his stomach, for a plug, consisting simply of an India rubber nipple such as is used in ordinary feedimg bottles, was introduced, and remained clasped in position by its hour-glass portion. The patient had rapidly increased in weight and had regained perfect comfort. Then, to the astonishment of those watching the case, he had become able to swallow food through the esophagus. Being in apparently perfect health, it was determined to close the fistula in the stomach. The patient was anesthetized, and an effort was made to determine, if possible, what had produced the original stricture. Two fingers were introduced into the stomach toward its cardiac extremity, when a pedunculated mass was found hanging high up and out of reach. Obstruction to the esophagus had evidently begun at the time the growth started. The mass was without doubt a polypus, which had originated at the cardiac extremity of the stomach as a sessile growth large enough to completely obstruct the orifice, but, on further development, becoming pedunculated, had gravitated into the stomach, leaving the esophagus free. The patient at the present writing was feeling perfectly well, and still retained this growth within his stomach, though it afforded him no inconvenience. It would, in the author's opinion, eventually become digested should its pedicle become long enough to allow it to hang on the floor of the stomach. If the patient should suffer inconvenience from its presence, the growth could be removed without difficulty by cutting down on the line of the old cicatrix.

The second case was that of A. H., aged fifty-two years, a miner by occupation, suffering from tertiary syphilis. This man had gradually lost the power of deglutition, but was otherwise in a fair condition. On examination, an esophageal sound of the smallest size could not be passed through the cardiac portion of the esophagus. There was great emaciation, and, for the relief of the progressive starvation, gastrostomy was resorted to. The operation was performed at two separate sittings, and the details were in effect those of the previously recorded case. After two weeks the emaciation had considerably disappeared and the opening in the stomach had enlarged to the size of a five-cent piece. No apparent change had taken place in the patient's power of deglutition, although he was given mixed specific treatment by the stomach. It had then occurred ta the author that it might be possible to introduce a sound through the opening in the stomach and so into the esopoagus from below upward. This was tried, and with success, beginning with the small sizes. On the third day dilatation was continued, and the patient was then able to swallow liquids with ease. In about a week alimentation was completely carried on by the mouth, and the patient submitted to the operation of closing the fistula. The man had since gained flesh, and was now in good health.

These two cases, the author thought, illustrated not only the value of gastrostomy as a means of supplying nutrition to the body, but also of exploring the stomach in its whole dimension. This latter idea, as applied to the pathology of the cardiac extremity, had, he thought not been given adequate attention, and he would be amply repaid if others were also enabled to find a solution to some pathological promblem of this region by the opportunity for exploration afforded by gastrostomy.

Tapping the Lateral Ventricles of the Brain.

Dr. J. Frank, of Chicago, presented a paper so entitled. After reviewing at some length the literature of the subject and citing cases and the opinions of authors, the writer went on to say that the interesting train of symptoms, long known and recognized—of which the principal were nystagmus, general convulsions, disturbance of the respiration, slowness of the pulse, vomiting, coma, and death—found a solution in the acceptance of the theory of compromise of the brain function by so-called intracranial pressure. Whether this pressure actually existed, or whether the symptoms had for their foundation irritation of brain elements by increased transudation, was of less importance than the possibility of the restoration of the lost brain function in part, or wholly, by removing collections of cerebro spinal fluid, blood, pus, or other foreign matter. Tapping for hydrocephalus through the fontanelles was so old a procedure that it could not be determined who first devised or practiced it. Tapping the ventricles by means of trephining was of more recent date, and the method had been technically perfected and shown to be easy of accomplishment. After describing in detail two successful cases recently operated upon by himself the author said that there was a point of election for reaching the ventricles; either of

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Keen's routes would make attainment of the object easy. They should not, however, be considered the only manner of finding the cavities, nor was it necessary to have recourse to them when the skull had been opened in a different place for injury or disease. From any point on the cerebral cortex it was not very difficult to puncture to the normal ventricle. Familiarity with its location and formation being the principal requiremenrs, it was easy where the cavity had been enlarged, as in chronic hydrocephalus.

After the usual aseptic and antiseptic details of preparing the head a crucial or curved incision, involving a flap, might be made to expose the cranium. A chisel, drill, or trephine, large or small, might be used. If the opening was too small, it might be enlarged with proper instruments. The dura might be simply punctured with a trocar or a dural flap made to expose the cerebral surfaces. This latter had the advantage of allowing closer observation of a cortex and of finger exploration between the cortex and dura. The instrument to be used for the puncture was optional with the operator and the depth of the puncture must depend upon the amount of fluid in the ventricle. Then came the very important question of drainage. Should it be rapid and free, or slow and in drops, and should there be irrigation? These questions would have to be decided to suit each individual case, as the requirements for each must necessarily differ. If the effusion into the ventricle was the result of acute and still active inflammation, the relief of compression by rapid removal of the fluid and continuous drainage until the acute stage subsided, or repeated tapping without drainage, would be a rational procedure. If the inflammation was in the stage of retrogression, the removal of fluid by simply tapping without drainage would be sufficient. In cerebellar tumors, or tumors in other situations, blood clot from trauma, etc., compromising the circulation to the extent of bringing about a hydrops ventriculi, if the condition was recent, rapid and continuous drainage should be employed. If it was of long duration, with a great amount of fluid, where the brain tissue was or might be atrophied, tapping and slow continuous drainage, or repeated tapping, would seem to be indicated. In chronic hydrocephalus with great distention of the ventricle, the brain tissue being atrophied and greatly altered in physical relationship, in order to allow of gradual return to something approaching normal condition, it would be best to both tap and drain slowly. Rapid emptying of the ventricle under these circumstances might be fatal.

In abscess of the brain breaking into the lateral ventricle, the most rapid and free drainage and cleansing irrigations were the only procedures promising relief in that most dangerous condition. In these cases it would be best to trephine and drain both sides and irrigate from side to side. Repeated tappings or aspirations might in some cases take the place of drainage. The means to secure drainage would be found in rubber tubes of different caliber, gauze, wicking, or horsehair. In special cases operative procedure could go further than puncture or drainage. The ventricles might be incised and opened with forceps so that any consistent mass of foreign body might be removed. When the skull had been opened for compression symptoms, which were confirmed by bulging of the dura and protrusion of the brain, and no tumor or clot or depressed bone being found, it would be indicated to tap the ventricles. In chronic hydrocephalus, with enlargement of the head, with great distention of the ventricles and corresponding atrophy of brain tissue, tapping and drainage would be indicated. The following conclusions were therefore arrived at by the author of the paper:

1. For the distension of the ventricles, for acute, simple, or tubercular meningitis, tapping the ventricles is a therapeutic measure clearly indicated, and, other things being equal, promises recovery.

2. For effusion of blood into the ventricles, from trauma or disease, the operation makes recovery a possibility.

3. For abscess, involving the ventricles, it is imperatively demanded.

4. In effusion into the ventricles from brain tumors it may offer relief to symptoms,

5. For chronic hydrocephalus, with moderate distention of the ventricles, without enlargement of the head, it may afford relief.

6. For chronic hydrocephalus, with great distention of the ventricles and enlargement of the head, the operation will lead to fatal results.

The president of the section asked if, in cases of distention from acute hydrocephalus, the author of the paper had tried laminectomy.

Dr. Frank said he should deem such a measure feasible in a condition of general distention.

Dr. Lavista, of the City of Mexico, expressed high appreciation of the work reported by Dr. Frank. He thought that in such cases simple trephining did not give s sufficiently wide area for work, and that the skull might advantageously be still further removed by craniotomy measures.

The Uses and Abuses of the Drainage-Tube. In What Class of Cases is Drainage Advisable?

Dr. H. O. Marcy, of Boston, read a paper with this title. He said its object was to ascertain if we already possessed the requisite data from which we might draw deductions and formulate rules for guidance in the employment of drainage in wounds. Basic to the fundamental consideration of the subject was the condition of the individual, the character of the injuries sustained, and the complications incidental thereto. The vital force, the individual resistance, varied in every instance, and must remain an x factor in every personal equation. It was this power in these reserved energies which was called into action in the repair of the structures after injury. In the struggle for the survival of the fittest the individual organism was ever at warfare with its sur-

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roundings, and the struggle for the mastery of the living over the dead was waged at the site of every injury, which was the battlefield where were brought into play the most subtle and occult processes of organic life.

The speaker, after referring to the general practice in the use of drainage, and quoting many of the authorities on the subject, went on to say that the object of drainage was to remove safely from a wound deleterious substances which, if allowed to remain, would in a greater or less degree retard cure. The infected material not only became dangerous in itself, but generated a chemical poison which in amount was often sufficient to produce death. To what degree the living tissues were endowed with resistant power for self protection could perhaps never be determined with accuracy. It was, however, settled byond a doubt that the healthy structures did have power to a certain extent to resist bacterial invasion, and that this power was in a more or less direct ratio to the physical vigor of the individual. Age, condition, and the phagocytic power of the cells to destroy bacteria under favorable conditions were also valuable factors in aiding the preservation of life. It was important that the surgeon should devitalize as little as possible the remaining tissues and that he approximate carefully cleaned surfaces. Was the present state of operative procedure sufficiently accurate to warrant the assertion that complications could not supervene? This was a question which must first be satisfactorily answered before we would be in a position to determine positively when, in aseptic wounds, we should employ or discard drainage. It was certainly clear that the experience of the past twenty years had been leading toward the solution of this problem until now it seemed demonstrated beyond a doubt that an aseptic wound might be made in aseptic tissues and maintained aseptic until restoration was complete. If this was true, the *modus operandi* of modern wound treatment must be mastered, as a ritual service of a higher religion, before a surgeon was competent to enter upon the serious responsibilities of his office. If aseptic conditions were maintained, then we might safely conclude that the drainage of the wound would not be necessary, and, if unnecessary, certainly undesirable. At best, the drainage-tube was a foreign body and its presence in a wound prevented primary union of that portion of the tissues which inclosed it. It kept the wound to a certain extent an open wound, and, as such, made secondary infection so probable that the most careful antiseptic dressings were required to absorb and disinfect secretions and prevent atmospheric contamination. In an aseptic wound, after the removal of a tube, the final closure of the tract was comparatively slow and by granulation. These were well-recognized objections, and efforts had been made to overcome them by many ingenious devices. If drainage was to be discontinued in aseptic wounds, it must be accepted that the greatest care should be exercised in leaving as little devitalized tissue as possible and in evenly coaptating the divided parts. The wound should be clean and dry. The different layers of the tissues should be joined with as little injury as possible and the external wound protected from infection. To reiterate, to secure the best results it was important to have clean incisions, devitalizing as little as possible the structures minimizing irrigation, sponging, compressing with artery forceps, retractors, and so on, and to rejoin with careful coaptation the divided structures by light, running, continuous, buried catgut sutures. The skin was easily coapted by a similar buried suture taken from within outward through the deeper layer only. The wound should be sealed with a germ-proof layer of iodoform collodion, re-enforced by a few fibers of cotton. Such wounds went on rapidly to repair without edema of the tissues, pain, or even tenderness, and the resulting cicatrix was minimized.

Were all aseptic wounds in healthy organisms to be thus treated? Without a doubt, as experience abundantly demonstrated; but the affirmative to such an important question was undoubtedly to be maintained only by the most scrupulous of aseptic measures. When in doubt, it might be better to drain large wounds, but the speaker could not question that he who used the drainage-tube in aseptic wounds unconsciously confessed thereby his lack of confidence in his ability to maintain an aseptic condition. In dealing with wounds the first consideration should be the safety of the patient. This was best conserved by a careful estimate of the individual and his circumfusa, his possible internal and external foes. The highest theoretical condition for wounds was their restoration as nearly as possible to the normal condition of the tissues and their retention at rest in an aseptic condition. This, in a great majority of wounds, rendered drainage not only unnecessary, but of positive detriment and a source of danger.

Complete closure of an aseptic wound by aseptic buried animal sutures, retained at rest by a germ-proof dressing, came nearer to the ideal than any method yet devised. There was no fear of hemorrhage in an aseptic wound thus closed. There was no further danger from infection; clumsy antiseptic dressings were entirely avoided, but little further care was necessary on the part of the surgeon or attendant, and the patient was relieved from fear of subsequent suffering from the removal of stitches. Stitch abscesses were impossible and the patient was free from pain and went on to rapid convalescence. The author was sure that a better knowledge of the condition of wounds would restrict the use of the drainage-tube almost entirely to septic wounds and that operative wounds in aseptic tissue would be aseptically maintained by primary closure, without drainage.

Dr. Quimby, of Jersey City, said that the drainage-tube was a foreign body, and as such was freqeently a source of danger to wounds which might otherwise heal by first intention.

Dr. McCrae, of Georgia, had not found iodoform collodion do so well if applied over bony prominences.

Dr. Prewitt, of St. Louis, thought that, as surgeons were not now so primarily septic, drainage tubes were not as generally in use. He agreed that in those cases where a septic condition extsted drainage was imperative. Any abdominal secretion would show in a few days that the tubes were infected with germs. There was no absolutely fixed rule, but drainage had probably been used too much and injuriously.

Dr. McCosh thought that every modern surgeon would feel indebted to Dr. Marcy for his assistance in the matter of improved wound treatment. His own practice was to dispense with drainage-tubes in every wound which might be considered aseptic. If there was an element of doubt, it was to leave the drainage-tube in for one to two days. In very large wounds, where there were extensive dead spaces, it was unwise to sew up or tie too tightly. Some strands of silkworm gut might be introduced, or rubber tissue, but not a drainage-tube. He was in the habit of flushing out the abdominal cavity and had never regretted doing so.

Dr. Laplace thought that the millenium of surgery would be reached when interference with Nature's processes was reduced to a minimum. Drainage was only indicated when, either before or at the time of a surgical procedure, Nature had been interfered with. He agreed that drainage must be provided for if we expected infection, but to-day we ought not to expect it.

Dr. Myer, of San Francisco, could not agree that drainage was a thing of the past. We should always have wounds requiring special treatment in the way of drainage. It was not always possible to command coaptation of the walls of a perfectly aseptic wound, and if secretions were allowed to flow into cavities, and unavoidable oozing took place, there resulted a perfect culture medium. He did not think there would ever come a time when the drainage-tube or packing could be entirely dispensed with.

Dr. Wilding, of New York, while believing that in septic surgery and knife wounds drainage should be unnecessary, thought there was a class of cases in which it would have to be employed. He did not like the drainage tube, but preferred some absorbable material.

Dr. Frank, of Chicago, said that since Dr. Marcy had urged sepsis as almost a *sine qua non* in the treatment of wounds, he had been making every effort to attain such a desirable result. He was, however, bound to admit that he had failed to get more than fifty per cent of union by primary intention. He had endeavored to keep his technique faultless, and had then closod up apparently aseptic wounds. The next day there would be a little rise of temperature He thought that auto-infection was a most important factor, and he believed he could trace trouble to the hypodermic injection. He thought that it was the duty of surgeons before operating to have their patients well overhauled as to their general condition, and did not see that there was any harm to be expected from a drainage-tube if such was favorable.

Dr. Lavista agreed to the conclusions reached by the author of the paper, but thought that the general organism of the patient wonld often play a most important part in determining results after an operation, notwithstanding any scientific endeavor on the part of the surgeon.

Dr. Pancoast thought that every practical surgeon would agree in the main with the author of the paper. It must, however, not be lost sight of that from any large wound made with a sharp edged tool there must be an effusion of serum, and though Dr. Marcy expected this wound to close up without such secretion, the speaker would prefer to feel that there was provided for a short time some proper means for the absorption of those unavoidable discharges.

Dr. Marcy then pointed out that the desirable result was not attained in too many instances, because surgeons did not give sufficient attention and take sufficient time in perfecting the toilet of the tissues before closing wounds.

SECTION IN GENERAL MEDICINE.

Vaso-Motor Ataxia.

Dr. S. Solis Cohen, of Philadelphia, read an abstract of a paper on this subject. He said that by the term vaso-motor ataxia he proposed to designate the condition of instability of the mechanism of circulation present in certain persons and characterized by abnormal proneness to disturbance, with tardiness of restoration, of the equilibrium of the cardio-vascular apparatus. The manifestations of these conditions were most strikingly displayed in the terminal vessels, and occurred chiefly under the action of external influences. The stimulus might be applied centrally or peripherally, but in each case the resulting phenomena indicated a defect of central inhibition. Vaso-motor ataxia was in many cases congenital, in some inherited, and it was not uncommon to find it present in several members of a family. In some cases the phenomena were paretic and in others spasmodic in character. Usually the two kinds were displayed in varying degree in the same patient; it made no difference, however, whether spasmodic or paretic, the symptoms were suggestive of inco-ordination. In exophthalmic goitre, especially such as were produced by emotion or were markedly intermittent, was found the extreme type of the paretic variety of vaso-motor ataxia. The form of Raynaud's disease known as "local syncope" furnished an extreme type of the spasmodic variety, while "local asphyxia" exhibited both spasmodic and paretic phenomen. Between the extreme there were numberless gradations down to the slightest departure from the normal. Even the extreme symptom groups represented merely exaggerations of phenomena that, under certain conditions, occurred in normal individuals. Dermographism was an essential feature of vaso-motor ataxia, and in most cases factitious urticaria could be readily produced by cold or by pressure, or by both. Mottlings of the skin, certain peculiar markings of the nails, teleangeiectases, and stigmata were common. Where there was this defect

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of central inhibition there was usually a hemorrhagic tendency, as shown by ecchymoses, petechiæ, epistaxis, hemoptysis, hematemesis, hematuria, and retinal hemorrhage. Even in the absence of hematuria, red blood-cells were often found in the urine. Uric acid, urates, and oxalates were likewise common. The presence of albumin, tube casts, and cylindroids was less common and was usually intermittent. Glycosuria had also been observed. In many striking cases there had appeared to be a morbid alteration of the thyreoid gland, as seen in Graves' disease. The action of the heart was usually rapid, irregular, and easily disturbed, palpitation was common, and in some cases intermittent tachycardia had been noted. Hemic and functional murmurs were occasionally heard. Among other symptoms and morbid associations observed were drug idiosyncrasses, urticaria, local edema, angina pectoris and pseudo-angina, hyperidrosis, asthma, hay fever, vertigo, migraine and other forms of headache, transient hemiopia and other visual disturbance, persistent mydriasis, astigmatism, myopia, hyperopia, menstrual irregularities, intermit tent polyuria, rheumatism, chorea, epilepsy, neurasthenia, gastralgia, and membranous enteritis, most of which were doubtless related as effects of a common cause or as secondary results. The development of pulmonary tuberculosis in some cases was probable a sequence of vascular and trophic disturbance in the lung. The author believed that the time would come when the many diseases of obscure origin could be traced to the sympathetic nervous system. Once attention was turned in that direction, the cases were given careful study, and a series of microscopical examinations was made, a great step in advance would have been taken in the pathology of these diseases.

Dr. Manuel Carmona y Yalle, of the City of Mexico, said that he had had quite an experience in the class of cases designated as a vaso-motor ataxia. In one of these the vaso-motor symptoms had been exhibited by a unilateral redness, sweating, and edema. He had always sspposed the disease to be due to a disturbance of the sympathetic nervous system.

Dr. West thought that the name of vaso motor ataxia, as applied by Dr. Solis-Cohen, was one that would be of considerable worth to the general practitioner, in that it simplified one's appreciation of the class of disease referred to. He had seen several cases which would come under the category of vaso-motor ataxia—for example, flashes of heat, localized sweating, redness, etc. He thought that some cases of insomnia could be attributed to this cause. As the causes of these condi tions had always been so obscure, he was glad that Dr. Solis-Cohen had advanced an idea that might lead to work being done in the right direction.

Dr. Solis-Cohen said that it was his belief that vaso-motor ataxia was congenital and due to imperfect development. This would account in many instances for its obstinacy in resisting treatment and the apparent futility of any measure directed to the improvement of the condition.

The Filaria Sanguinis Hominis.

Dr. De Saussure, of South Carolina, demonstrated the filaria as found in the blood of the colored people in Charleston. He also exhibited some specimens of the adult worm taken from the cavity of the heart of a patient who had died from general anasarca and exhaustion. The disease was peculiar to the southern countries of Europe, but had never been found to exist to any extent in this country until the author's investigations. He now had discovered that the existence of filaria in the blood was not confined to the colored people, and was not only increasing in that class but was to be found in the whites living in the same locality. The embryos were to be found in the blood only at night, and this was proved to be positive, as the habits of persons had been reversed to see if the filaria perhaps had any association with meals, sleep, etc. They could be found in the domestic dog both day and night, and also in the mosquito. It was impossible to say whether the dogs in that vicinity contracted the disease from the people, or *vice versa*. As for the mosquitoes, they might have extracted the blood containing the embryos from man, or they might have ingested them from the waters in that region, and really be the means of communicating them to man. The filaria was very easy of discovery; a drop of blood from the end of the finger placed under the microscope with a power of fifty diameters would disclose an organism with a rounded head and a sharp tail, and four hundred diameters would show some of the same structure as seen in the adult worm. The speaker thought that it was not improbable that the disease was brought about by the use of inferior drinking water, as the condition was almost exclusively confined to the lower class of colored people who lived in a very depraved way and drank water from swamps and sloughs. As a great many of that class of people died from dropsical affections, it was not at all unlikely that the disease was more prevalent than had been supposed. Chylocele, chyluria, and hematuria were some of the symptoms of the presence of the filaria in the blood. Patients suffering with any of these conditions should in every instance be examined for the filaria, especially if the known habits were depraved or the persons had been forced to live in bad hygienic surroundings and drink inferior water In a description of several cases that had attracted particular attention, the author referred to an examination of the fluid in a case of hydrocele showing the embryo of the filaria, and in another where the patient was suffering from chyluria, and the urine contained the organism. Dogs in the South frequently died from dropsical diseases and general anasarca, and the autopsy revealed the adult worm. The author described the very interesting case of a negress whose blood during pregnancy showed the presence of the filaria up to the time of the beginning of labor; during labor they could not be found, although repeated examinations were made. Examination of the child's blood immediately after birth revealed no embryo. The filariæ did not reappear in the mother or

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appear in the child until thirty days after confinement, when they were found in great quantities. Examinations of other members of the family showed filaria. In a summary of the facts in regard to the presence of the *Filaria sanguinis hominis*, the author said that there was no doubt that the disease was rapidly increasing in Charleston. The colored males were more susceptible to it than the females, and it was beginning to be found among white people. A case was related of a Northern man in the best of health, who had gone to Florida to open up some phosphate fields two years previously, and whose general health had so failed that he had repaired to Charleston for treatment. The author had examined the blood for malarial germs and discovered the embryo of filaria. This man had been obliged to drink inferior water and had been very much distressed with mosquitoes and fleas. That the disease was not hereditary there seemed to be no doubt. There was no pathognomonic sign of the disease, except that of microscopical confirmation, and that only at night. Many of the symptoms due to malaria might be present in the disease. If there was any symptom more frequent than another it was that of chyluria or dropsy. Increased heart action and heart murmurs were present. In some cases there might not be any deviation from the normal, and yet when the blood was examined the filaria be found. In one case that had come to autopsy, in which the filaria had been seen during life, no adult worms could be found. The patient had died from marasmus, brought on, no doubt, by the presence of the embryo in the blood. So far, no form of treatment had seemed to exert any influence upon the parasite. It was thought that the only hope would be some form of medication that would gain an entrance into the blood through the respiratory tract. It was found that if water was added to blood containing embryos they were dissolved; they seemed to melt in a watery solution.

Dr. Fell, of Buffalo, said that, while he knew that these embryos had been found only at night, yet he did not think that they could be altogether absent in the daytime. Probably there was some fault in the technique which had failed to discover them in daylight. If it was really a fact that they were present only at night, what scientific explanation could there be for such a phenomenon?

Dr. Victor C. Vaughan, of Ann Arbor, Mich., said that, while the geographical distribution of filaria was well marked, isolated cases had occasionally cropped up. One case had recently come under his notice in Canada. The patient had lived all his life in one district, and, so far as was known, had never come in contact with people from tropical climates that might have had the disease.

Dr. De Saussure said in reply to Dr. Fell that, if the examinations for filaria had only been made by one observer, there might be a doubt as to the correctness of the knowledge gained, but when all the investigators had failed to find the embryo in the daytime, there was no doubt that they were absent. The author had examined thirty-three cases, but had never found them in the daytime; he had been able to discover them, however, as late as ten o'clock in the morning and as early as at five in the evening, but at no other time during the day. It had been suggested as a form of treatment that venesection be tried, with the transfusion of a saline solution. Chloroform narcosis had been resorted to, but the effect on the filaria had been imperceptible. Death usually took place from some slow, exhausting disease in from two to three years.

The Cholera Asiatica of 1892.

Dr. J. Drummond Burch, of Aurora, Texas, reviewed the history of the epidemic of cholera of last year. He said that so long as the mud of the Ganges was sacred, so long would cholera trouble the earth. The disease was distinctly traceable to an endemic of cholera in India—first in Djelalabad, Afghanistan, a town largely Hindu, in December, 1891. Pilgrims carried it to the great Hurdwan Fair, about two hundred and fifty miles north of Lucknow, by March or April, 1892. Thence, "commerce having been ingrafted on religion," it traversed much of the route of 1831, as shown by Surgeon-General Cornish. One of the coldest winters known in Europe for years had failed to arrest or stamp it out, as was shown by the reappearance of the dread plague this summer. The untiring efforts of our American Government and local authorities had prevented its gaining a foothold among us. But how long has this preventable disease to be fought by nations not responsible for it? Why should a fanaticism of the Mohammedans of the East jeopardize the interests, health, and life of the whole world? There was no doubt that cholera was a reproachable cause of death that could be laid to the door of the British Government. After detailing the steps of the advance of cholera into the various points of Europe last year, the author went into the subject of treatment. In Hamburg the best results had been obtained from the use of hot bottles with clysters of tannic acid and water and hypodermic injections of camphor. There was a very strong argument in favor of inoculation, in the fact that persons once affected by cholera were somewhat safe against it. As prevention was better than cure, the author was in favor of inoculation with the matter as prepared by Pasteur.

Dr. Erskine B. Fullerton, of Columbus, Ohio, referring to the treatment of cholera, believed that he was the only man who had been successful in combating the disease with quinine. The facts and figures were given to prove that the disease treated in the penitentiary at Nashville, Tenn., in 1873, could have been nothing other or less than malignant Asiatic cholera, kept in check by the constant administration of quinine in sufficient doses. The speaker pointed out the fallacy of using the remedy hypodermically or by the unscientific intravenous injection. He believed that there was an identy between cholera and malarial disorders which accounted for the benefit from the administration of quinine. He also gave figures showing the impossible

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doses of other remedies necessary to equal in inhibitory effect forty grains of quinine To reach the seat of the disease, the remedy must be given by the mouth. Fifteen grains of quinine were sufficieut to inhibit the growth of the germ in about five quarts of fluid. With the rapid peristalsis of cholera, and the very small quantity of the remedy that would be lost through absorption, the currents being into and through the bowel, it was quite reasonable to suppose that even in the intestinal tube these experiments would hold good, and the quinine, instead of being absorbed by the stomach, would pass onward to the intestine where it was needed. When the remedy was given hypodermically it passed out rapidly by the kidneys and was lost to attack the disease, which was in the intestine. The speaker believed that the experiments of Sir Spencer Wells and Dr. E. A. Parkes, with their intravenous injections of quinine, resulting in a high rate of mortality, had done much to injure the cause of this drug. All authorities had agreed that quinine in almost all cases very shortly stopped the vomiting. The diarrhea was usually checked within a few hours. Where the dose was sufficient, reaction promptly followed the cessation of the symptoms, there was no consecutive fever, and convalescence was rapid. It appeared from the records that doses of about ten grains every hour seemed usually to give better results than larger doses at longer intervals. In the fulminant cases the thing to do was to give the quinine more rapidly. In cases of obstinate vomiting enteroclysters of quinine, forty to sixty grains in two quarts of warm water, should be tried. There would be an inhibitory margin for four times the amount of fluid mentioned, and some of this might be got beyond the ileo colic valve. A long list of tables was read showing the rate of mortality under different treatments during different epidemics. The recent Hamburg epidemic, under "mixed" treatment, had caused a mortality of 48.44 per cent. The author's report, gathered from the epidemic of 1873 and others of recent dates, under the quinine treatment, showed the remarkably low mortality of 4 8 per cent.

Some Medical Facts Connected With the Discovery of America.

Dr. A. M. Fernandez de Ybarra, of New York, read a paper with this title. He said that the principal object of his paper was to state what he had been able to gather together from a lengthened correspondence of the probable disease that had caused the death of Christopher Columbus and his ailments during his voyages of discovery in America. Instead of mental impairment coming, as had always been said about the great discoverer, it was shown that his mental vigor had kept up until the very last. His great suffering from chronic articular rheumatism, taken with the facts of physical incapacity from that cause and his many bitter disappointments, had rendered him morose and irritable. But if these obstacles had been removed and Columbus could have carried out his desires, the world would never have heard of insanity with him.

Amebic Dysentery.

Dr. H. A. West, of Galveston, Texas, read a paper on this subject. He said that the question of amebic dysentery was of practical importance in consequence of the diversity of opinion in regard to the definition, varieties, and etiology of dysentery; and more especially the non-recognition by the general medical profession of the causal relations of the *Ameba coli* in the production of dysentery and the wide dissemination and frequent occurrence of this form of the disease. He called attention to the following points:

1. The importance of a correct definition of dysentery.

It was not, as was usually taught, a morbid entity, consisting of an inflammation of the large intestine essentially the same in all forms and climates, varying only according to climate and other modifying conditions. On the contrary, the term dysentery should only be used in a general sense to express a group of inflammations of the large intestine, partly of specific and partly of non-specific origin.

2. The adoption of the following classification would do much toward dissipating the existing confusion—viz., acute catarrhal, acute diphtheritic, amebic, and secondary dysentery.

3. Amebic dysentery was more widely disseminated and occurred with greater frequency than was generally supposed.

4. To emphasize the probable entrance of the ameba through impure drinking water.

5. To note the characteristic and uniform symptoms of this form of dysentery.

6. The essential chronicity and difficult cure depending upon the character and location of the lesions.

7. The necessity of combating the excessive anemia and wasting by the use of a more liberal diet than was generally prescribed.

8. To urge the importance of cleansing and antiseptic irrigations as a rational method of reaching and destroying the ameba and stimulating the intestinal ulcers to heal.

9. To note the fact that, while solutions of quinine were destructive to the ameba, injections of the same had failed to exercise any marked curative power.

10. The speaker's experience showed that mild injections of nitrate of silver (thirty grains to a quart of water), with the occasional administration of salines and large doses of bismuth and salol, constituted the best treatment.

The details of seven cases illustrative of these points, treated in the John Sealy Hospital, Galveston, from October, 1892, to June 1, 1893, showed the comparative frequency of this form of dysentery in that locality. There were only two or three cases of catarrhal and none of diphtheritic or secondary forms admitted during that period. Two of the cases had originated upon the same steamship in Vera Cruz, and the fact strongly pointed to infection through the drinking water. One of the patients had acquired the disease while traveling

through the Indian Territory and North Texas. One was from Arkansas, where he had lived for some time in the alluvial bottoms of the Mississippi and Red Rivers. Those two had also drank impure and stagnant water. The other three cases had originated in Galveston or its immediate vicinity, and no history of infected water could be obtained.

The symptoms were very uniform; though they might begin acutely, they would very soon become chronic, and were characterized by irregularity in the flux. The character and frequency of the stools alternated between improvement and relapse. The difficult cure and chronicity depended upon the nature of the lesions—viz., ulceration of different portions of the large intestine and sometimes of the ileum, with a disposition to infiltration and undermining of the mucous membrane, affording a nidus for the development, growth, multiplication, and destructive work of micro-organisms. The nature of the disease was such as to produce very rapid anemia and wasting It was necessary to combat these results by the plentiful use of nitrogenous food. The character of the lesions gave the key to the most successful treatment, which consisted of thorough irrigation of the intestine—first, with simple warm water for cleansing purposes; secondly, with an antiseptic solution for destroying the organisms and stimulating the ulcers to heal.

Dr. Gardiner, of Indiana, related his experience with the class of cases described by Dr. West, and said that he had come to the conclusion that there existed an undoubted relationship between drinking water and amebic dysentery.

Dr. William Osler, of Baltimore, thought that under different circumstances the sympioms of amebic dysentery varied, and that they might approach those of typhoid fever, such as hemorrhage, exhaustion, and death. He also thought that there was an association between that form of dysentery and hepatic abscess.

He had found in some acute cases the injection of quinine to be very beneficial, but as a general thing the nitrate of silver to be more reliable.

The Bacteriology of Dengue Fever.

Dr. J. W. McLaughlin, of Austin, Texas, read a paper on this subject. The paper was a review of original investigations in the bacteriology of dengue fever which the author had made in 1885, dnring the last epidemic of that disease which visited the Southern States of North America. In addition, the author was now able to present for the first time photo-micrographic illustrations of the micrococcus which he had obtained from the blood of persons suffering with dengue fever. An inspection of the photomicrographs reproduced revealed group arrangements of the micrococcus that were distinctive of the micro-organism of dengue fever and were not found in other pathogenic bacteria. The three photo-micrographs exhibited represented distinct and different group forms of the same coccus, which, however, bore a relationship to each other. They had been obtained from the same mounted preparation of jelly culture. As the same group forms were constantly found in other mounts, the conclusion that they represented development stages in the biological history of the micro-organism seemed well taken. And, furthermore, as this grouping had never been observed in other pathogenic bacteria, and was characteristic and distinctive of the culture of the micro-organism which had been obtained from the blood of the dengue fever subject, the author felt justified in maintain that it was intimately, if not causatively, associated with that disease.

Some remarkable results had been obtained by applying glacial acetic acid to cover-glass preparations of freshly drawn dengue blood. When these were examined with a dry one-sixth, or, better, with a one-twelfth oil-immersion objective, numerous ovoid cocci of a yellow-brown color were seen in the blood plasma. The blood-cells, which could be distinctly seen, were normal in appearance and numbers and did not contain any of the ovoid bodies. If such results were confirmed by future investigations they would be valuable for diagnostic purposes. In conclusion, the author said that, as the work had been done in 1885, and at that time the apparatus with which he had had to deal was more or less extemporized, he hoped that the imperfections of his work would not be too closely criticised. That there were many, he was sure, especially when viewed from the present advanced standpoint of bacteriology.

Dr. Gardiner was glad to find that an advance had been made in the pathology of dengue fever, and that to Dr. McLaughlin was due the honor of isolating the pathogenic germ. For his part, he had always been inclined to think that there was an association between influenza and dengue fever. At any rate, if there was not a pathological relationship, there was certainly a marked clinical similarity.

Dr. West did not think that because dengue fever had some of the symptoms of influenza they were one and the same disease. There was no doubt in his mind that dengue fever had a distinctive pathogenesis. To the author of the paper great credit was due for his work in establishing a definite germ as a causative agent in dengue fever.

On the Culture of Anerobic Bacteria.

Dr. F. G. Novy, of Ann Arbor, Mich, read a paper with this title. The paper consisted of a brief resume of the principles and methods employed in the culture of anerobic germs. The methods were described under five headings:

1. Exclusion of oxygen.
2. Exclusion of air.
3. Absorption of oxygen.
4. Displacement of oxygen.
5. Cultures in the presence of air.

Hitherto examinations of micro-organisms of this class had been attended with such difficulty and expense that no great advance had been made in their study.

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The speaker exhibited an apparatus which he had made in Germany, and which for simplicity could not be improved. It was a vacuum glass jar made large enough to hold several culture tubes. The apparatus permitted of the making of large serial cultures and the use of various culture media, whether solid or liquid, and also enabled streak culture on agar and Esmarch roll tube cultures to be made. The usual sealing in a flame was discarded and replaced by a much more convenient procedure. The culture media employed for the growth of anerobic bacteria were also discussed, and the value of peptone, glucose, and gelatin additions was carefully pointed out. The addition of litmus was shown to possess some valuable properties. Pure cultures of anerobic bacteria could readily be obtained even in the presence of air with as much ease as ordinary aerobic cultures. The common anaerobic bacteria could be thus cultivated without any special apparatus, and such cultures furthermore possessed the advantage of retaining their vitality for a considerable length of time.

A New Anaerobic Bacillus of Malignant Edema.

Dr. Novy read a second paper with this title. He said that in several guinea-pigs which had died after injections of an impure milk nuclein solution, a marked edematous condition had been observed, resembling, and even more pronounced than, that of malignant edema. In the subcutaneous tissue, peritoneal exudate, heart blood, spleen, liver, etc., had been found enormous nnmbers of long, slender bacilli. This organism was found to be anaerobic in character, and pure cultures possessed marked infectious and extremely toxic properties, producing death in from twelve to thirty six or forty-eight hours, with the characteristic edematous condition. White rats, white mice, rabbits, guinea-pigs, and pigeons were all extremely sensitive to the poison. The organs and tissues of animals that had died after inoculation with pure cultures contained very few germs, and often none could be found, showing that the normal body was not a very good soil for the growth of the germ. By injecting certain chemical substances and cultures of common non-pathogenic bacteria at the same time with the virulent germ, this natural resistance of the body was altered, and as a re sult the germ developed in enormous numbers throughout the body. This new, highly pathogenic, anaerobic bacillus was motile and the flagella could be readily demonstrated by Loeffler's method. In some of the cover-glass preparations made from animals colorless spirals could be observed. In cultures on certain media and under certain conditions there were found similar spirals which in realty were giant whips. These could be seen in hanging drops even with a dry objective. These abnormal flagella were exactly the same as those described by Loeffler in connection with symptomatic anthrax, and their formation was probably due to involution changes. The germ was readily stained with simple dyes and also by Gram's method Spore formation had not been observed, but the germ itself was extremely resistant. It could be grown in a vacuum, in hydrogen, in carbonic acid, in nitrogen, and even in il luminating gas.

NOTES AND ITEMS

Notification of Tuberculosis.—The Philadelphia County Medical Society has appealed to the Board of Health of Philadelphia, to place tuberculosis upon the list of contagious diseases to be reported to the Board.

An Anomalous Biceps Muscle.—Thebault recently showed to the Anthropological Society of Paris a human biceps muscle which had three supernumerary muscular bundles. One rose from the long belly of the biceps and was inserted in the pectoralis major. A second had its origin from the fleshy body of the muscle and joined the brachialis anticus. The third bundle extended from the upper surface of the muscle to the superior margin of the capsule of the shoulder joint. This anomaly is analogous to the condition found in the gibbon.

Professor von Helmholtz's Visit.—Professor von Helmholtz sailed for Germany on October 7 by the steamer Saale (Boston *Med. and Surg. Journ.*). On the evening of the 6th, he delivered an address on the ophthalmoscope at the College of Physicians and Surgeons; after which a reception was given him at Columbus College by President and Mrs. Low. On the following night a reception was given in his honor at the Century Club. During his stay in New York Dr. Helmholtz was the guest of Dr. Herman Knapp, and an interesting episode of his visit was his meeting with Dr. Alexander Graham Bell, whose invention of the telephone was one of the results of the Professor's investigations into the laws of sound.

Movable Kidney with Hydronephrosis.—In an article on this subject, published in the *International Medical Magazine*, Dr. D. W. Graham makes the following conclusions:

1. Intermittent hydronephrosis is a frequent sequel of movable kidney.

2. Mental disquietude may be the only symptom of a movable kidney or hydronephrosis.

3. On the other hand there may be functional disturbance of every neighboring organ.

4. Disturbance of the functions of the kidney may be less marked than that of the other organs.

5. Hydronephrosis is a progressively destructive condition.

6. Nephrorrhaphy is indicated as a preventive measure even when not called for by the severity of the symptoms *per se.*

7. Hydronephrosis once developed is most effectually and safely treated by lumbar nephrotomy and drainage.

8. Nephrectomy for hydronephrosis is not warranted unless the kidney substance is completely destroyed or the ureter is impervious.

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Ichthyol Suppositories in Prostatitis.—Freudenburg (*Centblt. f. klin. Med.*) recommends ichthyol suppositories in this affection. He has used them in from 30 to 40 cases during the past two years, and only in two did they fail to give relief. The cases were mostly subacute or chronic. Any necessary treatment of the urethra was carried out at the same time. The suppository consists of gm. 0 5, increased up to 0.75 of ichthyol to gm. 2.0 to 2.5 cocoa butter. If any irritation symptoms appeared—and this may happen with any suppositories—smaller quantities of ichthyol were employed. Two, and sometimes three, suppositories were used in the day. The author refers to other cases in which ichthyol had been tried, and more especially to Scharff's 40 cases, but here the prostatitis was acute and mostly gonorrheal in origin, and a 10 per cent solution was injected into the rectum.—*Brit. Med. Jour.*

The Palmo-Plantar Sign of Typhoid Fever.—Dr. Filipovitch, of Odessa (N. Y. *Med. Jour.*), thinks he has discovered a diagnostic sign of typhoid fever that may prove serviceable in cases where at first the usual pathognomonic symptoms are wanting. It is a peculiar callous look and an orange-yellow or saffron-yellow hue of all the prominent parts of the palms of the hands and the soles of the feet—parts which, as is well known, are more or less rosy in health and become bluish in cases of cyanosis. The phenomenon is explained by the enfeebled action of the heart, a diminished amount of blood in the capillaries, and the dryness of the skin. He has observed it in every case seen by him during the last two great epidemics of typhoid fever in Odessa, and his observation is confirmed by another Russian physician, Dr. Skibnevsky. The sign disappears as soon as convalescence begins.

Dr. Filipovitch's article appeared in the *Revue Medicale* for August 20, and an abstract of it is given in *Lyon Medical* for September 10.

Hereditary Syphilis.—Erlenmeyer asserts (*Zts. f. Chir. klin. Med.*) that hereditary syphilis may not show until after the tenth year, and mentions these cases:

1. The father died of syphilis of the brain. The son, born two years after the infection of the father, showed, in his twelfth year, hereditary syphilitic symptoms in the mucous membrane of the mouth, swollen glands, and eruption on skin. Completely cured by inunctions.

2. Father died of syphilis. The son, in the thirteenth year, showed syphilitic traces in the bones and joints. Completely recovered by the use of iodide of potash and iodoform injections.

The father of the first case, a physician, asserted that the child showed no traces up to the time of his, the father's, death.

Erlenmeyer also believes that a father can infect the child *in utero* without infecting the mother. He opposes Colles' law and says he has observed a second infection. He narrates the case of a woman to whose syphilitic husband she bore first a miscarriage, then a full term syphilitic girl, then a healthy boy, then again a sound boy, and then a syphilitic girl. The mother died by accident and an autopsy showed an enlarged liver. He asserts that there was no trace of syphilis. That the healthy children had another and sound father, he also denies.—*Schmidt's Jahrbucher.*

Life Insurance Medical Recommendations.—A life insurance company is a sponge. It belongs to the octopedia or millepeda. It has a head-center, grasping arms which extend to immense distances, agents as suckers and medicine men as tentacles or feelers. Through its agents it sucks into its colonial meshes such an enormous surplus of nutriment, that it permits its chief sucker to retain fifty per cent of the premium blood drawn from the veins of each newly captured victim; while its corpulent head-center appropriates an amount of this same vital fluid which, if transmitted into coin, would equal from ten thousand to seventy thousand ducats annually. The tentacles decide as to the sanitary condition of the victims. They receive scanty pabulum for their services, which are, or should be, of the greatest value. The judgment of other medical men (especially those of recognized prominence) as to the ability and fitness of the tentacles is constantly sought by the head center. The opinion desired may be of immense importance; it may insure success or ward off disaster; but the insurance octopus sponges the opinion; he disgorges no ducats; he emits not even a worthless thank. He propounds in a circular a series of questions as to the age of the tentacle whom he proposes to employ, when and where he was educated, his qualifications as a diagnostician, the acuteness of his senses, especially his hearing, the amount of his business, his shrewdness, his mental and moral integrity, his ability to resist the allurements of the willing victims and the anxious sucker, his social and professional standing; and then he craftly pretends that the valuable time spent in answering fully these, and many more searching questions, is for the sole benefit of the proposed tentacle, while at every moment he knows that the prentense is a false one, and employed only to excuse sponging the wished-for information from the meek and complaisant physician. More than this. He is guilty of the contemptible meanness of promising that if the friendly tentacle shall be maligned and betrayed, the gratuitous betrayal will be guarded sacredly as "confidential."—H. D. Didama, M.D., "Transactions of the New York State Medical Association," vol. 1892. *Medical Record.*

Chlorate of Soda in Cancer of the Stomach.—At a meeting of the French Association for the Advancement of Science, in August last, Dr. Brissaud, of Paris, made a report upon the above subject (*Med. Rec.*). He said that it was an established fact that solutions of chlorate of potash exert a very favorable influence on epithelioma of the mouth and certain forms

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of cancroid of the face. The successful results obtained with this method induced him to try the effect of the corresponding salt of sodium in the treatment of carcinoma of the stomach. This salt was selected because it is much less toxic and more soluble than chlorate of potash, seeing that relatively large doses may be injected into animals without ill effect, and that it is soluble in three times its own weight of water, while the potassium salt requires twenty parts of water for complete solution. He had treated several undoubted cases of cancer of the stomach by the administration of chlorate of sodium in doses varying from eight to sixteen grammes (two to four drachms) in the twenty four hours. The results were so satisfactory that if his observations were limited to one or two cases only he would hesitate to publish them, because he might possibly have mistaken cases of chronic gastritis for cancer; for the former, as is well known, sometimes present all the symptoms of malignant disease. But during the last four years he had tried this treatment with equal success in five successive cases of localized gastric cancer, and it is difficult to admit that an error of diagnosis was committed in each of these five cases; this is the more improbable seeing that three of the patients presented a distinct epigastric tumor. In every case the treatment was followed by the most remarkable improvement, amounting practically to a cure. The drug was given in doses of twelve, fourteen, or even sixteen grammes in the twenty-four hours, and the patients may now be regarded as radically cured. Under the influence of this treatment, the melaena, hematemesis, and cachexia disappeared; the appetite returned; and in the three cases in which a tumor could be detected in the epigastrium, it gradually subsided until no trace of it was left at the end of six weeks. On the other hand, the treatment failed in a number of cases, for while chlorate of sodium seems to exert a favorable influence on malignant tumors of the epithelial type, it produces no effect whatever on the interstitial sarcomatous type of neoplasms. Moreover, the failure in some of these cases is to be attributed either to the fact that cancer had already spread to other organs, or to the presence of complications which were not amenable to the treatment. For example, in one case the liver was already involved when the administration of chlorate of soda was commenced. In another patient, a young woman who had at first experienced some relief from the treatment, the disease suddenly extended to other parts of the body, where it developed with extreme rapidity. She was a patient of Dr. Nelaton; she received sixteen grammes of chlorate of soda a day, and in the course of a few weeks hematemesis ceased, appetite returned, and she put on sixteen pounds in weight. This improvement was so remarkable as to suggest an error of diagnosis. At the autopsy, however, cancerous nodules were found in various organs and tissues. In a third case death was due to plebitis of the inferior vena cava. It cannot, therefore, be included in the statistics of the treatment of gastric cancer by chlorate of soda.

Nasal Catarrh.—Dr. William Porter, St. Louis, recommends the following:

℞ Resorcin, - - - - - - - - gr.x.
Glycerine, - - - - - - - - oz.j.
Katharmon, - - - - - q. s. ad oz.iv.
M.
Sig. For spray.

The Elixir Six Hypophosphites (W.-G.'s) has proved a valuable tonic and blood restorer in cases depending upon or having their origin in debility, and especially in female ailments, such as anemia, chloro-anemia, leucorrhea, accompanied with feeble digestion and debility. When the leucorrhea is associated with constipation, Elixir Six Aperiens (W.-G.'s), and a simple astringent vaginal injection is prescribed with the best results.

Asthma.—The bromides, Belladonna and Cannabis Indica have been, and still are, the sheet anchors in this common and distressing malady. Trousseau, and others after him, was wont to push Belladonna to the limit of toleration in Asthma and thus he secured results equaled by no one of his time. A combination of these, always efficient agents, in Neurosine has in this disease given more satisfactory results than any other known remedy.

Sozoderma Soap.—This article has been favorably reported upon and adopted by a large percentage of the profession in their practice with skin diseases, scald head and other scorbutic maladies of children; we learn of most satisfactory results from its use. Thymoline, its active principal having a healing effect on a diseased cuticle. This Soap is far superior to the super-odorous carbolic soap used so largely by medical men and surgeons, which is in the highest degree obnoxious to the sense of small. Messrs. Hall & Ruckel, of New York, the Proprietors, are mailing samples to physicians, one of which may be had free upon application and mentioning this journal.

Sennine in Catarrh, Etc.—It is clear enough that Bacteria can and do gain entrance to the body through lesions of the skin. So it is equally clear that they gain such entrance through lesions of the mucous membranes of the mouth, nose and throat, and all the more readily because of the constant inspiratory processes going on through these cavities. In catarrhal conditions of these parts Sennine destroys the germs at the threshold of their entrance. It is used effectively by means of the insufflator, or the spray in solution. Equal parts of bicarbonate of soda may be added for use in either form. Being in the form of a powder, free from odor and of a slightly sweetish taste, it is especially agreeable in these cases while its curative properties are unequaled by any thing heretofore presented.

We Wish to Call the Attention of our readers to the advertisement of Griffith & Co. (appearing for the first time in this journal), of their Compound mixture of Guaiac, Stillingia, etc. As these Tablets are solely designated to be dispensed on Physicians' Prescriptions it is earnestly suggested that in order to avoid delay or misunderstanding to write for them thus:

℞ Tablets "Guaiaci. et Stillingiae, Comp." No. XVI.
Signa. (Griffith & Co.)
Swallow two Tablets and repeat in from four to six hours if required. —— —— M.D.

It Tonsilitis allow one to dissolve slowly in the mouth.

The action of these tablets are very prompt and decided. If a slight sensation of heat in the stomach should follow their use, it can be corrected by taking one-half teaspoonful of Bi-Carbonate of Soda dissolved in a little water.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

Traumatic Neuroses in Court.

BY DR. L. BREMER, ST. LOUIS, MO.

Read before the First Annual Meeting of the Southwestern Association of Railroad Surgeons, St. Louis, Oct. 27, 1893.

Of all the diseases which within the last ten years have prominently engaged the attention of the medical world, there is none that deserves more interest and is of greater practical importance, than that group of nervous disorders, which have been styled the traumatic neuroses. It is especially since the meeting of the tenth International Congress held at Berlin in 1890, that this question has occupied a prominent place in medical thought and discussion the world over. The somewhat acrimonious debate, on that occasion not altogether free from personal antagonism, had as an immediate consequence, the effect of stimulating renewed study and producing a flood of literature on the subject.

Oppenheim's book on the traumatic neuroses had not only renewed and intensified the interest, but also excited wide-spread contradiction.

Oppenheim, in contradistinction to Charcot who classed all neuroses following accidents as hysteria, tried to demonstrate in his book that there is a type of disease quite peculiar in its manifestations particularly on the part of the nervous system, a type which is only met with after injuries, and railway injuries in particular.

The opponents of Oppenheim have contended that he described a disease which he called *the* traumatic neurosis, meaning thereby a well defined nervous disorder, characterized chiefly by concentric narrowing of the visual field, anesthesia or hypesthesia, irritability of the heart and certain mental anomalies.

This disease as such, they claim does not exist. There are traumatic neuroses, however, resulting from injury coupled with shock, for instance, hysteria, neurasthenia, chorea, epilepsy, shaking palsy, etc. These neuroses constitute a family; they are more or less closely related to each other.

Most frequently among these traumatic neuroses are found hysteria and neurasthenia or a combination of the two, hystero-neurasthenia.

Whilst Oppenheim claims that predisposition and heredity are extremely rare and that the victims to his traumatic neurosis were ordinarily robust men before the accident, Charcot and with him the French school, assert that the injury is only the provoking agent of a disease which exists in a state of latency. Without the accident the person might have continued in good health for the rest of his life; the injury and the mental shock, however, changed a dormant into an active trouble.

The French claim that Oppenheim's cases are simply hystero-neurasthenic, i. e. graver cases of post-traumatic neuroses, and that they do not represent specimens of a clinical entity.

The drift of opinion in neurological circles is in this direction and Oppenheim himself seems to have made some concessions to the French school of late.

In France traumatic hysteria seems to be the prevailing form of the neuroses under discussion. With us, traumatic neurasthenia is certainly the predominant form, the difference being due to racial peculiarities.

The importance of those lesions, considerable though it is from a clinical point of view, has been materially increased of late years on account of the ever increasing frequency of damage suits resulting from them.

Owing to the great discrepancy still existing on the nature and import of these affections and the diametrically opposite views given by the physicians of the litigating parties, these suits generally form very knotty problems for the jury to solve.

The difficulty in the way of a righteous verdict lies in the very nature of the affections under discussion. If there is a visible injury, a fracture for instance in any part of the body, or lesion of the integuments or the deeper tissues, it is to the layman a comparatively easy matter to comprehend, how such an injury may be followed by transient or lasting nervous symptoms, which may constitute, as they do in the traumatic neuroses, the chief and prominent sequelæ of the injury. This difficulty is increased by the too frequent occurrence of exaggeration or downright shamming on the part of the injured in cases where damage suits are brought.

The trouble will, I am afraid, go on increasing owing

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to the spread of knowledge on the subject among the masses of the people. To this dissemination of knowledge is to be added the prevailing tendency to fleece the soulless corporations; on the other hand, the real victim to a traumatic neurosis will have a difficult task of convincing a skeptical jury, which through doctors and lawyers have been made acquainted with the great prevalence of simulation of nervous disorders.

Unfortunately the symptoms of the disease are in the vast majority of cases of a subjective nature. Hence very frequently the veracity of the claimant supported by the testimony of a physician viz. that such and such symptoms may result from the alleged injury, form the exclusive evidence in the case.

One of the commonest complaints of the sufferer from a traumatic neurosis is pain. How can this be demonstrated? If we possessed an instrument, by which we could gauge the pain, an algesiometer, ananogously to the aesthesiometer matters might be considerably simplified. As it is, pain is a relative and indefinite quantity. Mucius Scaevola puts his hand into the burning coal without flinching, Charles XII smokes a pipe whilst the surgeon removes by deep incisions a bullet from his leg, but the impressionable weakling will convoke a medical faculty for an ordinary belly-ache.

Almost equally difficult of determination is the degree of anesthesia or hypesthesia which are so frequently complained of by such patients. It is a very easy matter to detect contradictory statements in regard to the intensity of anesthesia; and a person must not be set down as an impostor when the result of the examinations of one sitting does not tally with that of a preceding one. The degree of attention and the varying condition of the patient himself are responsible for these discrepancies.

On the whole, it may be stated as a general proposition that a claimant for damages is not to be looked upon as an impostor by the examining physician, because contradiction in regard to his present condition and that of the past are discovered. For a defective memory and an instability of the perceptive faculties are among the commonest symptoms of the traumatic neuroses. Again, if the case be one of traumatic hysteria, the phenomena are often almost incredible, especially to him who has no neurologic or psychiatric training. A knowledge of this latter branch of medicine, is above all requisite for the correct interpretation of the symptoms and behavior of the traumatized neurotics. For it is not the peripheral nerve, nor the spinal cord which is principally affected in these neuroses, but the mind. It is a psycho neurosis which the examining physician has to deal with. This mental anomaly, the hypochondriomelancholic tinge which almost invariably is met with in the traumatic-neurotics, has been used as an argument against the hysterical nature of the trouble, since the hysteric have generally an air of hopefulness or indifference about them and are notorious for their abrupt changes from one mood to another. But it is as strange a fact as it is incontestable, that the male hysteric is morose, despondent, embittered, quite in contrast with the female victim of the disease.

Taken for granted now, that a certain proportion of the traumato neurotics are afflicted with hysteria or in worst cases hystero neurasthenia, it becomss apparent at once, why it is that the symptoms presented by such a case seem so incredible and out of keeping with what is ordinarily observed in injury and disease. Expert examinations as to eye, ear, heart, lungs, etc. and the tests usually employed to unmask imposition have, as a rule, a very bad effect on such patients and not unfrequently, what has been a simple neurosis at first, has by injudicious, overzealous activity on the part of the examining physicians, been converted into a psychoneurosis of a grave character. It will not do, to tell such a patient that he is only hysterical and that, being a man he has no business to be so. Hysteria may be a grave disease, and male hysteria, especially that due to injury is apt to be particularly obstinate and intractable. The same holds true of traumatic neurasthenia which is generally less accessible to treatment than the non-traumatic variety.

In all these conditions now, there is a general tendency to exaggeration of the symptoms. It is physiological to the disease as it were, and ought not to be put down as an unfailing sign of shamming with the intent of increasing the award of damages.

We ought always to bear in mind, as stated before that the disease is psychogenous in character and that its proper diagnosis belongs therefore to the domain of the psychiater and neurologist. And even he is apt to be misled, in cases of this class unless he has paid strict attention to the literature on this subject for the last 4 or 5 years, during which a considerable stride towards better and exact knowledge has been made.

It is not my object in this paper to describe traumatic neuroses in all their details, their fundamental and secondary symptoms. My intent and purport is, to point out the difficulties surrounding this matter, specially in cases of litigation.

The exaggeration of originally existing, and the acquisition of new symptoms through examinations made by a number of physicians, each of them asking about, and thereby suggesting some new symptom generally or exceptionally met with in traumatic neuroses, has led to quite a new nosological species of morbid phenomena, the litigation symptoms, so called. To reduce them to their proper level and to eliminate them from the legitimate clinical picture, is one of the most difficult tasks of the examining physician.

As a rule, patients who have their claims in court, get worse mentally and physically. The worry and anxiety which even the healthy and vigorous individual has to undergo in a lawsuit, which is to decide on his financial future, is a particularly hard strain on the nerves of the traumato neurotic.

The excitement incident to litigation renders his case progressively worse, and many a claimant would have fared much better in health and happiness, had he

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settled at a reasonable figure instead of undergoing the harassing wear and tear of a lawsuit. Not the most liberal award will repay such a man for the often deep and lasting damage his brain has sustained from prolonged litigation.

On the other hand, it is often astonishing what amount of elasticity and recuperative power is exhibited by the successful claimant. Nowhere has the gold-cure celebrated greater triumphs than on the field of traumatic neuroses, if administered by a benevolent jury. There dwells a familiar figure in the memory of those who frequently have to deal with these cases of the neurotic cripple, who has to be assisted to ascend the witness stand and gives his testimony in a feeble and broken voice, an utter, pitiable wreck, physically and mentally, who a few weeks later is capable of carrying the weight of several thousand dollars in silver, the award of damages, without any apparent difficulty.

Again, cases are on record where successful litigants openly bragged after having secured their booty, how they duped the doctors, judge and jury.

Such occurrences are not frequent, but their reality is incontestable. The unjustifiable benefit which one undeserving individual derives through such practice necessarily redounds to the detriment of the deserving victim.

In order to exclude any possible errors of diagnosis, the aim of all original investigation of the subject has been, to establish the objective signs of the neuroses and, if possible, such symptoms, as cannot be simulated and which are characteristic enough to exclude other diseases. Unfortunately, there is no objective sign which cannot be successfully simulated by one who through association with real traumato-neurotics has become sufficiently familiar with the leading symptoms. The only exception seems to be the concentric narrowing of the field of vision, so much insisted upon by Oppenheim (according to Charcot this is one of the most valuable, though not constant, stigmata of hysteria, whether ordinary or traumatic), the acceleration of the pulse, especially on pressing the painful spots, as a rule situated at one or more of the spinous processes, (Mannkopf's sign) and the difference of the pupil, the one on the affected side (in cases of hemianesthesia or hemiplegia *e. g.*) being larger than the other.

But it may be broadly stated that all these symptoms are not characteristic of the traumatic varieties of hysteria, neurasthenia, and hystero neurasthenia, that they are as frequent in the non-traumatic forms, hereditary or acquired, and that as a matter of fact they are observed in quite a variety of other neuroses and chronic affections in general.

It would devolve then on the defense to prove that the person sueing for damages was neurotically tainted before the accident, which, of course, is generally a matter of difficulty and impossibility, since every claimant will insist on his previously perfect health; and there are scores of witnesses to prove it. My experience is that in quite a number of such patients a pre existing neurasthenia could be elicited. Of course, this name does not figure in the patient's previous record; as a rule the terms biliousness and dyspepsia are named which generally are nothing more nor less than symptoms of genuine neurasthenia.

On the other hand, it devolves on the examining physician to establish as to their proper value, the symptoms observed in the claimant and to find out, how much of them is due to the accident and what may have existed before. A very difficult task indeed.

To illustrate the obstacles besetting the subject, especially when complicated by litigation, I shall briefly mention a few of the cases with which I have had personally to deal.

I believe that one of the most curious instances in forensic medicine, and thus far a unique one, where the problem of the causation of diseases was involved, is that of a woman who, several years ago claimed that she had been permanently injured while ascending in an elevator of one of the large drygoods houses of this city. She contended that the machinery had come to a sudden stop, throwing her forward and causing her to land on her head. Since that moment she was paralyzed in her lower extremities. The damages were laid at $20,000. The defense, however, convinced the jury that the claimant had had hysteria all her lifetime, that the alleged injury received by the sudden stoppage of the elevator, which could not be proven, was in reality one of the attacks common to hysteria usually called hystero-epilepsy, and that a disease remained which has the uncommon and formidable name of hysterical astasia abasia, but which is in spite of this name a reality. The jury found against the claimant.

In another instance a railroad was sued also for $20,000 damages by a traveling salesman who had jumped from a train to avoid the effects of a collision. Since that time, or any rate several months later (as is often the case in traumatic neuroses), he had evinced a number of neurasthenic symptoms which he claimed were caused by the accident. The train had moved at the time this occurred, with a velocity of six to eight miles an hour; in jumping plaintiff had landed on a heap of gravel and had fallen on his knees, bursting his pants at that point. There had been no injury except an insignificant abrasion, nor had anybody else been injured, not even the engineer who remained on the engine at the time of the collision (the engine had been damaged only to the amount of one hundred dollars). The defense succeeded in convincing the jury that the injuries were too insignificant to be looked upon as the cause of the neurasthenia (despondency, rachialgia, inability to work, etc.), from which plaintiff was undoubtedly suffering, there being data enough in the previous history of the patient pointing to a very strong neurasthenic diathesis.

In a third case which may be briefly mentioned, a man, known to be an alcoholic of a pronounced type, had been struck by the beam of the barrier at a railway crossing through the negligence, it was alleged, of the

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watchman in attendance. The pole which, owing to the counterweight at one end did not descend with great velocity grazed the man's head, who stumbled, but did not become unconscious. There was not the "traumatic narcosis" in the language of Bergman, so ominous an occurrence, as a rule in accidents of this nature. The man, after the accident, if it was such, visited several bar-rooms and had later on leeches applied to the site where the beam had struck the head. Two days later a surgeon examined him, after he had returned home (the accident befell him while on a visit to this city) found nothing to indicate an injury either to the scalp or bone, not even the evidence of a contusion. The only lesion visible was the leech bites. This man soon after the injury developed symptoms of mental alienation. The symptoms were such as are generally observed in alcoholic insanity. His friends, however, thought that the disorder of his mind was referable to the injury sustained from the pole, and after he had partially recovered, he sued the company, the proprietor of the barrier where the accident and happened. It was learned that the medical experts that were to appear for plaintiff hinted at a depressed fracture as the cause of the mental trouble. The claim of damages was $20,000. The case never came to trial. It was compromised at $1,000. It was plainly one where the trauma did not play the least of a pathogenic role.

These three cases taken at random from the cases of my own experience show the importance of hysteria, neurasthenia and alcoholism in the development of traumatic neuroses and psycho-neuroses. They demonstrate the importance of the diathesis or predisposition and reduce to its proper value the injury, as simply the provoking agent of a dormant trouble. The task of the examining physician will be to ascertain in the first place the gravity of the existing nervous disorder and next the probability or improbability of a connection as to cause and effect between it and an alleged accident.

If anywhere a reform is needed in the administration of justice, it is in the suits for damages. Nowhere in the whole machinery of the law are there more farcical performances found than in the courts where damage suits are tried for personal injury; and nowhere is there such an opportunity for the profession to exhibit their chronic disagreement, as on the question of traumatic neuroses. As a rule there are two opposing sets of doctors One is trying to prove to the jury that the plaintiff is a damaged man and incapacitated for life, the other set will try to prove that there is not much the matter with him, that he is exaggerating or putting on and feigning disease which does not exist. This war of experts who as a rule are not familiar with even a rudimentary knowledge of the neuroses is generally a source of great amusement to the lawyers and the jury, but does not redound to the good name of the profession; much less is it calculated to help the jury distinguish between right and wrong. Ready wit and repartee is too often counted for knowledge and the testimony of an ill-informed tyro may outweigh that of the experienced physician. Not, until trained and trustworthy experts are appointed by the state to pass on doubtful cases and instruct the jury in accordance with their finding, will there be an improvement in the defective and erroneous method of arriving at verdicts in cases of traumatic neuroses claiming damages. Under existing conditions the true medical expert is generally hampered by counsel of the opposing party in his effort to elucidate the case. The prevailing custom that only the experts for plaintiff are allowed to examine his person is certainly not calculated to help the jury in their effort at reaching a just verdict. The fact is that there is too much hedging and dodging done by medical experts, to help the side for which they happen to be engaged. They thus run the risk, or rather are necessarily exposed to, the danger of turning advocates, where they ought to be impartial witnesses.

Quite reprehensible is the practice which has been actually resorted to by some experts, of going into a law suit for damages on the plan of sharing in the profits resulting from the verdict. This is lowering the already low standard of our profession. What for a lawyer to do under such conditions may be legitimate and proper, is utterly impardonable in a physician.

Some facetious observer has divided prevaricators in court into three classes, liars, blank liars and experts. Let us try to help to get the medical experts excluded from this category.

Syphilitic Spinal Paralysis. — Kowalewsky (*Neurol. Centralbl.*) reviews the clinical features and differential diagnosis of the affection described under the above title by Erb and designated syphilitic transverse myelitis by Charcot. The disease is almost confined to males between 30 and 45 years of age; its development is slow; disturbance of the bladder function is often one of the earliest indications. Frequently, in addition to symptoms resembling spastic paraplegia, there are sensory disorders of diverse kinds, sometimes with trophic derangement. Spasticity of gait, however, is not always observed, and never is so marked as in lateral sclerosis; muscular rigidity and increase of deep reflexes also are less pronounced than in spastic paraplegia. Amongst 152 cases of syphilis of the central nervous system treated by the author during 1892 there were 38 affected with tabes and 21 with syphilitic spinal paralysis. In all the latter there was functional derangements of the bladder, mostly shown by inability to restrain detrusor action whenever the disire to micturate arose. The rectal function was similarly deranged in many of the cases. Increased myotatic irritability was a constant condition. Great exaggeration of the "thermic reflex" in the lower limbs was found to be a characteristic peculiarity of the disease; cold or heat applied to the lower extremities evoked strong convulsive contraction. The psycho physical reaction time for tactile and painful stimuli was normal or slightly shortened—an opposite condition to that obtaining in tabes.—*Br. Med. Jr.*

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EDITORIALS

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Etiology of Endocarditis.

Endocarditis is the result of the invasion of the endocardium by micro-organisms which are also found in other inflammatory affections, such as osteo-myelitis, pneumonia, suppurations, etc., but it may also be caused by bacteria which so far have not been found in other infectious diseases. To the first class belong the staphylococcus pyogenes aureus, streptococcus pyogenes and the diplococcus of pneumonia; of less importance as etiological factors in this disease are the staphylococcus pyogenes albus and the bacillus pyogenes fetidus. To the second class belong the micrococcus endocarditidis rugatus, micrococcus endocarditidis capsulatus, bacillus endocarditidis griseus, bacillus endocarditidis capsulatus and an uncultivatable bacillus, which have been described by Weichselbaum, and a bacillus fetidus described by Fraenkel and Saenger. The etiological significance of the bacteria of the first class is, according to the investigations of the various authors, certain, of those of the second class very probable; while, according the Ziegler, other bacteria that have been accused of causing endocarditis are probably due to post mortem or to secondary invasions; to the latter belong the tubercle-bacilli.

At a recent meeting of the Society for Internal Medicine at Berlin, Prof. Leyden has shown a specimen from a case of malignant endocarditis in which he was able to demonstrate gonococci in the fibrinous deposits upon the aortic and mitral valves, there being no other bacteria present. Cases of endocarditis due to gonorrheal infection have been reported before, but the gonococci have not been demonstrated and the endocarditis may have been produced by an accompanying septic process, for in some cases of this class streptococci were found in the fibrinous deposits.

To differentiate gonococci from other similar looking bacteria Gram's method of staining and decolorizing is used; the gonococci being decolorized by Gram's method. The occurrence of the organisms within the pus- and epithelial-cells is another characteristic of the gonococci; also their peculiar shape, viz., double biscuit shape, varies from those of most other diplococci. In the healthy urethra of a woman (Bum) as well as in the urethra of children diplococci have been found, which are said not to be microscopically differentiable from the gonococci. For practical purposes, however, the practitioner is justified in calling those diplococci gonococci which have this peculiar form and location (intracellular) and are decolorized by Gram's method.

Action of Bicarbonate of Sodium on the Digestion.

Linossier and Lemorne (*Nouveaux Remedes; N. Y. Therap. Review*) have made experiments concerning the action of bicarbonate of soda on the digestion of a patient with regurgitations and have drawn the following general conclusions:

1. Bicarbonate of soda administered in any dose, even of ten grammes, is a stimulant of the gastric secretion.

2. One hour after digestion this stimulation of the gastric secretion produces the first saturation of the alkali.

3. If the dose administered is small, the stimulation of the secretion continues after the alkali has been neutralized, and causes a slight temporary increase of muriatic acid.

4. If the dose is medium, the stimulation lasts longer. The maximum proportion of muriatic acid in the contents of the stomach is attained more slowly, but is larger.

5. If the dose is a large one, the secretive function

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exhausts itself to neutralize the alkali, and the proportion of muriatic acid may be less than it is normally when the food leaves the stomach.

6. The time required for the muriatic acid to attain its maximum proportion in the chyme, is as follows for the different doses: two hours after a dose of 0.5 grams of bicarbonate of soda; three hours for a dose of 1 gram, and four hours for a dose of 5 grams.

7. Given one hour before meals, one gram acts as a small dose, five grams as a medium dose, and ten grams as a larger dose. Given just before meals, 0.50 grams is a small dose, 1 gram a medium dose, and 5 grams a large dose.

8. The doses producing the best stimulation are consequently 1 gram just before meals, or 5 grams one hour before.

9. Bicarbonate of soda, given just before meals, suspends the secretion of pepsin.

10. The saturative action of bicarbonate of soda, administered in a dose of 2 grams one hour after a meal was very slight and without stimulation; the action lasted longer but equally without producing stimulation after a 5 grams dose, and definitely after a 10 grams dose. That is to say the normal proportion of acid had not been recovered at the end of the period of digestion.

The practical conclusion to be derived from these experiments, as far as the treatment of hypersecretion of muriatic acid (hyperchlorhydria) is concerned, is that, in order to avoid the consecutive phenomena of excite ment, repeated small doses, producing only incomplete saturation should be used before large doses. A medium dose may cause only a temporary relief followed by an increase of the symptoms. The doses will usually vary, with different patients.

11. Carbonate of calcium would probably be superior to bicarbonate of soda in the treatment of hyperchlorhydria, as after its use, and with an equal quantity of acid secreted as follows the administration of bicarbonate of soda, there is no production of free acid.

12. The action of the alkalies continues after meals during which they have been administered. The stimulation of the secretion is still observable two days after the last dose has been given.

13. Abnormal fermentations are enhanced by the administration of bicarbonate of soda from the moment of its ingestion to the re appearance of normal acidity, and may continue thereafter. The only case in which abnormal fermentation seems to be stopped despite the administration of the drug, is when it is given in small doses one hour before meals.

14. From a therapeutic standpoint, bicarbonate of soda is essentially a remedy for the insufficiency of gastric secretion, and must be administered preferably some time before meals. In hyperchlorhydria it is only a palliative remedy, which is liable to aggra vate the general course of the disease by exciting the mucous membrane, which in this case is already too much excited. The administration of muriatic acid might be of some service in diminishing the secretive activity of the glands. Further experiments will be made to verify this hypothesis.

Three Cases of Atropine Poisoning, One Treated with Tannin and Two With Morphine.

C. Binz reports two cases of atropine poisoning and quotes others which illustrate the use of morphine as an antidote to atropine (F. H. Williams, M.D. in Boston *Med. and Surg. Jour.*).

In the first case, which was treated with tannin, a boy, seven years old, took nearly the whole of a bottle of solution of atropine, intended for the eyes, which according to the recipe, contained .05 atropine sulphate in 10 c. c. of water. A few minutes later he lay raging on the floor, alternately screaming and laughing, in constant motion and with a flaming face. About half an hour after the atropine was taken, his physician gave him one gramme of tannin, but in spite of this the raging condition lasted for two days in undiminished violence and then it gradually decreased until on the fourth day he fell into a deep sleep and recovered.

In the second case, a boy three years old, took, between 8 and 9 A. M., a solution of atropine intended for the eyes; the exact amount taken could not be determined. About 12 o'clock he was brought into the clinic and his stomach washed out; the patient was restless, threw himself about, uttered fearful sounds and did not recognize his father and mother. At 12.15 P. M., .003 of hydrochlorate of morphine was subcutaneously administered, but it did not bring rest. At 12.30 another injection of .005 was given and a few minutes later all appearance of disquiet had ceased and about 1 o'clock the boy was in a sound sleep. At 4 P. M. he waked up and was again excited. At 5 P. M. he took some milk with relish, but there was manifestly still much physical disturbance and .003 morphine was again injected. Quiet followed, but no sleep. At 11 P. M. he fell asleep and gradually recovered without further use of morphine.

The third case was that of a workman, fifty years old, who had suffered since 1885 with sciatica. In one of these attacks his physician, by mistake, injected subcutaneously atropine sulphate instead of morphine. A few seconds after this the patient was in a raging condition, tried to climb up the walls and thought he was pursued by animals and fearful forms. Twenty drops of .01 of morphine in 25 c. c. of water was administered every hour. In the afternoon the patient gradually became quiet and sleep followed. Except for great exhaustion during the days that followed, the patient was well and since then has had no sciatica.

Binz concludes by saying that morphine would not be suitable for every case, nor in every stage of atropine poisoning, but only in the excited stage. Choral hydrate may be used instead of morphine, but it has a more weakening effect on the heart than the latter and must be used with great care.

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Observations on the Nature and Treatment of Angina Pectoris.

Dr. J. Burney Yeo after discussing the known modes of causation of attacks of angina pectoris, summarizes the indications for treatment as follows (Boston *Med. and Surg. Jour.*):

1. To maintain or improve, when defective, the general nutrition; to avoid all strain, physical and emotional; and so to relieve cardiac feebleness and excessive effort.

2. To relieve dyspeptic conditions and flatulent or fecal distension of the stomach and intestines.

3. To forbid the habitual consumption of agents which may exercise a toxic action on the heart, such as tea, coffee, tobacco, alcohol, etc., or that may introduce or develop toxines in the alimentary canal.

4. To avoid and remove all gouty and other blood contaminations.

5, To give such tonic remedies as may improve the cardiac tone and lessen existing tendency to cardio-vascular degeneration.

6. To relieve the paroxysmal attacks by sedatives and stimulants.

1. Under the first indication Dr. Yeo speaks of the necessity of careful attention to hygienic measures; the life of the patient must be one of complete repose of mind and body—a repose alternated with gentle exercise. Life in the open air and in a mild climate is also beneficial. The diet must be carefully looked after and sometimes be almost exclusively of milk. If the digestive powers are greatly weakened it may be necessary to have recourse to pre-digested foods or to give with the food some artificial digestive agent. The writer mentions a number of dishes that may be easily assimilated and then goes on to say the physician should see that a sufficient quantity of water is taken, both for eliminative and assimilative purposes, a point often overlooked.

2. The co existence of dyspeptic states must be treated in accordance with general principles—an alkaline bitter stomachic, composed of sodium bicarbonate, nux vomica and columbo, an hour before the two principal meals, will be found valuable. Regular evacuation of the bowels of fecal accumulations is most essential—checking as it does the formation of injurious toxines in the intestines, eliminating waste substances and relieving abdominal disturbance. Dr. Yeo here suggests various remedies as aperients.

3. This indication is also an important one, for certain of the slighter forms of angina are no doubt dependent on, and the more serious forms may be provoked by, the habitual use of certain substances which come, in course of time, to exercise a toxic action on the heart. The action of these toxic agents is all the more subtle because they may be taken for many years without apparently producing any injurious effect. This is particularly the case with tobacco, the toxic effects of which on the heart are often delayed until, or even after middle age, when they will perhaps somewhat suddenly make themselves felt. The toxic and degenerating influence of alcohol falls upon different organs in different individuals; but whenever anginal symptoms arise complete abstinence from alcohol should be insisted on or its very sparing use in a very dilute form. Tea and coffee are often provocative of the slighter manifestations of cardiac pain and discomfort and they are prone to be aggravated by any emotional disturbance. All these toxic agents must be forbidden so long as any tendency to anginal attacks exists.

4. The next indication is to remove and avoid all gouty and other blood contamination. The importance of elimination in the treatment of angina pectoris is universally admitted. When renal elimination is defective from the co-existence of renal degeneration, the bowels and the skin must be acted on. When the kidneys are sound, the free use of pure water, or some suitable mineral water having some slight stimulating action on the kidneys, may avoid the necessity of free purgation; but in all cases a thorough daily evacuation of the bowels should be procured and free action of the skin should be maintained by warm baths and frictions. In gouty cases, and in all cases of defective elimination, the diet should be sufficient, but careful and spare, avoiding all excess. Animal food should be taken only in great moderation and fresh vegetables and fruit carefully prepared and cooked so as to be made easy of digestion should take its place. All alcoholic stimulant should be avoided and if acceptable to the patient a few weeks of exclusive milk diet may be advantageous.

5. Dr. Yeo considers next the medicinal treatment of these cases, and first, the appropriate treatment in the intervals—that is, of the constitutional condition underlying the paroxysmal attacks. He points out in certain cases the value of the milder preparations of iron, combined with small doses of digitalis, in other cases of the greater value of arsenic; the usefulness of strychnine as a cardiac tonic, of potassium iodide when angina pectoris is associated with obvious signs of cardiac vascular degeneration and of the gouty state, etc.

6. Those who see in the causation of the anginal paroxysm the predominating influence of vaso-motor spasm consider that the main indication for the relief of the paroxysm is to administer medicinal agents which are known to have the power of relaxing the arterioles; they therefore advocate the use of the nitrites, such as the nitrite of amyl, nitro glycerine, and sodium nitrite. That these agents do relieve the paroxysm in many cases of angina is certain; that they do so wholly by their action as vaso dilators is extremely doubtful. In the first place they are capable of relieving the anginal attack when there is no certain evidence of the existence of vaso-motor spasm. Dr. Douglas Powell says he has found them "far more reliable in the graver cardiac cases than in the purer vaso motory," but it is in the latter that they should prove most efficacious if the prevailing theory of their action were true. Balfour and Grainger Stewart both believe that they act as direct analgesic agents, and that they have

the power of relieving pain in other as well as in cardiac neuralgias, independently of their relaxing action on the blood-vessels; and this view Dr. Yeo adopts as the most consistent with the clinical history of the disease.

The effect of sodium nitrite is said to be more lasting than that of nitrite of amyl or nitro-glycerine. It is given in tablets of 2½ grains; one to four of these may be given for a dose. At the onset of an attack, in addition to the inhalation of the nitrite of amyl which, owing to the rapidity of its action, is the most suitable remedy to start with, some warm diffusible stimulant may be given, such as thirty minims of sulphuric ether or a drachm of nitrous ether, with a drachm of sal volatile or a little brandy in an ounce or two of peppermint water. Feet and hands if cold may be placed in hot water. Balfour has been disappointed in action of nitro-glycerine and prefers inhalations of nitrite of amyl; and when these fail—as they often will—he resorts unhesitatingly to chloroform inhalations; sulphuric ether may be used, but it is not rapid enough. Chloroform may be poured on a sponge in a smelling bottle and the patient is told to breathe it through his nose as deeply as possible. "In this way relief is obtained in a few seconds, and so soon as the narcotic influence is produced the smelling-bottle drops, and with it rolls away all risk of any overdose." In severe and protracted attacks it may be necessary to have recourse to hypodermic injections of morphine.

Thyroid Feeding in Myxedema, Cretinism and Psoriasis.

At the meeting of the British Medical Association (*Therapeutic Gazette*) at Newcastle, Dr. George Murray showed some cases of myxedema, and as these were some of the earliest where thyroid feeding was used, they give an opportunity to note the effect of time in the result. Two years ago, his first case, a woman, was almost unable to walk, had lost nearly all her hair, was very deaf, her speech was nearly unintelligible, and she had very markedly the cutaneous affection characteristic of myxedema. A glycerine extract of the gland was first injected, and the patient improved almost immediately. Later feeding with a raw gland or with a few drops of glycerine extract was substituted for the injection and improvement went on uninterruptedly. The patient can now attend to her household duties, her hair has grown again, and her speech and hearing are normal. She is extremely sensitive to the least overdose, and can only bear about five minims daily of Brady & Martin's extract; if the remedy is withdrawn she begins to get puffy and stupid again. In all Dr. Murray's cases there was not the least tendency to the establishment of a tolerance; the same dose continuing to have the same effect after a long course of treatment, and the effect of an overdose was just as apparent at whatever stage it was given.

Dr. Murray found in his experiments on monkeys, that by the removal of the thyroid gland he could produce the characteristic myxedematous condition, and then restore them to a normal condition by supplying them with the thyroid juice of the sheep, being able to repeat the experiment at will with constant results in the same animal.

Dr. Bramwell and Dr. Thompson obtained remarkable results by the use of the thyroid gland in sporadic cretinism. One of Dr. Thompson's cases was a boy, who had a normal sister, many inches taller than himself, although several years younger. Under thyroid feeding the brother began almost immediately to grow and was still rapidly reducing the distance between his sister and himself. Dr. Murray also spoke of a cretin under his care, who grew nearly an inch in a few weeks as a result of thyroid feeding.

In the first case of myxedema which Dr. Bramwell treated there was in the course of treatment profuse desquamation of the skin of the palms of the hands and soles of the feet. And he noticed that the same phenomenon occurred in the subsequent cases submitted to the same treatment, which comprised eleven of myxedema and three of sporadic cretinism. This effect on the skin led Dr. Bramwell to try the internal administration of the thyroid extract in psoriasis. The first case of psoriasis was of nine months' duration, and was general over the whole body. On February 4th half a thyroid gland was given, and the dose was continued daily; by the 10th there was decided improvement; on the 14th the crusts on the back were shed in large scales leaving smooth skin; by March 3rd, the cure was nearly complete. On April 1, as there was apparent arrest in improvement, the thyroid treatment was abandoned and arsenic was given, but with disastrous results. On April 11, the thyroid treatment was resumed, fifteen minims of Brady & Martin's extract being given daily. On June 6 the patient was discharged cured.

The second case was of seven months' duration. On May 10, five minims of thyroid extract were given. On the 15th, the dose was doubled, and on July 14 the patient was discharged cured.

The third case was of six and one-half years' duration, and notwithstanding the previous failure of all other treatment the patient was practically cured after six weeks of thyroid treatment. Dr. Bramwell has tried this treatment in several other less severe cases, with complete success except in two instances. In one of these failures the patient was an epileptic who was taking large doses of bromide during the thyroid treatment, and that may have been the cause of the failure. Dr. Bramwell has tried this treatment in a case of lupus, and considerable improvement resulted. He hopes for equally good results in cases of acute eczema.

Dr. Simons stated that he had seen a case of obstinate psoriasis improve remarkably from the administration of Pohl's spermine. He suggested that the action of all animal extracts might be, as Pohl thought, due to an oxidizing influence on the tissues.

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ABSTRACTS

Bacterial Poisons.—No subject at the present day can be more interesting, and yet but little is known respecting bacterial poisons (Boston *Med. and Surg. Jour*). The work of Gamaleia ("Bacterial Poisons," Detroit, 1893. American Edition, translated by E. P. Hurd, M.D.), despite its literary merit and the great array of facts, is a little disappointing, and one really wonders on reading this book that so much could be written, and so little information given. The first experiments of Seybert, Gaspard Stich, Magendie, Dupuis and others established the symptoms and lesions of experimental septicemia. Panum showed that it is produced by a chemical poison: Bergmann and Schmiedeberg determine this poison to be an alkaloid sepsine. This result marks a first stage in the investigation. Down to about 1870 Panum's views were almost universally prevalent. Bergmann's sulphate of sepsine, obtained in crystalline form from putrid infusions, was believed to be the veritable putrid poison that causes septicemia, and the action of microbes was ignored. Sepsine was thought to be a ferment, acting in infinitesimal quantity. It was, however, soon found to be impossible to ascribe all the forms and symptoms of septic poisoning to sepsine alone, and that the poisons produced by putrefaction were many and various conditions; and there was for many years a contest between chemical and the vitalist doctrines, ending in the victory of the latter. Liebig's hypothesis that the soluble ferments are albuminoid matters in process of decomposition, was overthrown by Pasteur, who demonstrated that fermentation and decomposition do not exist apart from the life of organized ferments. Moreover, the contagionists were soon able to prove the fallacy of the chemical doctrine by showing that certain microbes separated from their morbid products were able to produce determinate diseases. At the same time was established the fundamental notion, proclaimed by Cohn, of the specificity of bacteria, and bacteriology took its place among the sciences. The vitalist doctrine was not, however, in absolute contradiction to the chemical; and Panum has the merit of having understood the possibility of reconciling the two theories. He affirmed, that "it is incontestible that the putrid poison is chemical, but that it might be produced by a microbe, even a determined microbe. In diseases, both the pathogenic microbe and the production of the poison by the microbe, may play their respective parts." These words, uttered in the infancy of bacteriology, have been shown to contain a profound truth. The discovery of ptomaines by Selmi, Brieger, Gautier and others marks the next stage in progress. These discoveries date from about 1870. The list of cadaveric alkaloids naturally resulting from putrefaction of albuminoids was soon quite large; and the query was soon raised whether it might not be dangerous to eat flesh, or even fish, and other animal products, for fear of ptomaine poisoning. At least, invalids with weak digestive functions were warned of the danger. Later on, a careful criticism of the work of Gautier, Nencki, Brieger and others justified looking with suspicion on their different methods of extraction of ptomaines. This is even warrant for believing, as Gamaleia shows, that these methods were likely to create artificial products which did not pre-exist in the albuminoids analyzed. A part of the work of these experimenters will still stand; but the spontaneous formation of ptomaines is not so constant a phenomenon as was taught, and the microbial poisons are not ptomaines. As for the typhotoxine of Brieger, Bassi has shown that it does not pre-exist in the cultures of the typhoid bacillus; and Salkowski has never been able to find the peptoxine of Brieger in the products of gastric digestion; in fact, Bouveret and Devic have proved this supposed ptomaine to be "an artificial product which is formed at the expense of albuminoid matters by the combined action of HCl and alcohol." Roux and Yersin, as a result of their experiments on the poison of diphtheria, conclude that by all its reactions the the diphtheritic poison resembles diastases, and none the less by its intense activity in infinitesimal doses. Gamaleia, after a somewhat exhaustive examination of the whole subject, and with the help of researches of his own, concludes, "that the toxic action of the bacteria is not linked to their fermentative action; it does not coincide with any known diastasic action." The microbial poisons have been supposed to be "secretions;" nevertheless, this comparison with secretions accounts but superficially for the facts. "First, there are certain pathogenic bacteria which produce such diseases as tuberculosis, cholera, and charbon, where we do not find any toxic secretions. Then, again, even the production of poisons in diphtheria and tetanus has a very superficial correspondence to a secretion. In fact, the quantity of these poisons in the culture liquids does not grow proportionately to the development of the bacteria themselves. On the contrary, an attentive observation reveals the following facts: At the very first, and at the most active moment of the life of the microbes, the liquid of culture is acid, and devoid of all toxic power. Later, when the bacteria have ceased to multiply and are deposited at the bottom of the culture flask, the liquid becomes alkaline and very highly toxic. Its toxicity augments progressively with the duration of the sojourn of the bacteria in their alkaline liquid of culture." The explanation of this fact he finds very simple: "The poison is contained inside the bodies of the bacteria, and is extracted slowly by the alkaline liquid in which they are macerated."

We have not time to pursue the subject further, and must refer those interested in the subject to the treatise itself. In short, Gamaleia believes that the microbian poisons "are the results of the curative syntheses of the bacteria, and come from their bodies. "Thus is again confirmed our hypotheses respecting their chemical nature, which identifies them with the constituent parts of

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the nuclei of cells—the vitellines and nucleines. The toxicity of the microbian bodies may have also a teleo logical signification explicable from the point of view of the struggle for existence and of natural selection; for the toxicity of the bodies of bacteria may be useful to them as a means of preserving them against aggressors which would devour them."

Relation Between the Alkalinity of the Blood and Intestinal Absorption.—Castellino and Cavazzani (*Gaz. degli Ospitali*), have sought to ascertain whether, and if so how, the process of absorp tion from the intestine is modified in association with altered physical and chemical conditions of the blood; secondly, they have sought to establish how such changes of the blood influence in the human subject the general metabolism of the body. The study is not as yet complete, but the authors have ascertained the fol lowing facts; In distinctly alkaline serum, the retic ulum of the hyaloplasm of loucocytes undergose stimu lation, which causes increased irritability and more active vital manifestations in the protoplasm. In liquids poor in alkali the protoplasm appears torpid and show in its reactions, but in these cases contact with alkaline serum speedily evokes increased activity; Contact of faintly alkaline serum with leucocytes in a medium favorable to their activity depresses their movements, and accelerates the processes of degenera tion. Serum which is but faintly alkaline nearly always produces transparency of the protoplasm, and throws out the nucleus. From the above facts, the authors argue, first, that alkalinization of the blood favors intes tinal absorption; and,secondly, that as the passage of food from the intesting through the lining mucous membrane is probably due in great measure to the ac tivity of the cells lining the villi and to the leucocytes, alkalies would cause an increase in the rapidity of absorption by stimulating the activity of the proto plasm, and increasisng its chimiotactic powers.—*Med. and Surg. Rep.*

The Treatment of Sciatica.—Dr. E. Valentine Gibson has published an analysis of one thousand cases of sciatica, with special reference to one hundred cases treated by acupuncture. The results on discharge from the hospital of one hundred consecutive cases of sciatica treated by acupuncture are as follow: 56 per cent were cured, 32 per cent were much improved, 10 per cent were improved, and in 2 per cent there was no im provment. The results are satisfactory, considering the chronic nature and the severity of the majoriy of the cases. All these were treated by acupuncture, and they all used the Buxton thermal water, which has such a great reputation for the absorption of inflammatorv products. Acupuncture the author consider very val uable. Dr. Gowers states: "Simple acupuncture along the course of the nerve has been recommended; it gives temporary relief, as does any superficial pain, but the cases are very few in which it has a permanent effect." The writer belives that Dr. Gowers refers to cutaneous acupuncture of the nerve itself, which was the method employed in these cases. The patient can alwa)s tell when the nerve has been pierced by pain shooting down the leg. The needles ought not to be left in situ for any length of time, but withdrawn immediately, as un less this is done severe pain is often caused on their withdrawal, and no better results seem to follow this line of treatment. A single spear pointed needle two and a half inches long is all that is required, as the depth of tissue to be pierced can be regulated according to the situation and the development of the patent. If the nerve is not pierced on the first introduction of the needle, it can be partially withdrawn and entered again at a somewhat different angle, and in this way the nerve may be pierced in several different places with but one cutaneous puncture. The nerve should be pierced about five times over the part where there is pain on pressure. The external popliteal nerve to the inner side of the biceps tendon may also be pierced if it is painful, and as it is not covered by muscle this can eas ily be done. There is often pains situated on the outer side of the leg, which in all cases is probably due to "referred pain." The musculo cutaneous nerve may be punctured along the whole of its course, but being of small size a'd lying deeply it is naturally more diffi cult to pierce; but, even if the nerve is missed, the needle, passing in close proximity, must exert counter irrtation. These cases, without exception, he considers were due to an inflammation of the nerve-sheath, this affecting primarily the adventitious tissue, and in more severe cases spreading into the interstitial tissues—a perineuritis and an interstitial neuritis respectively. This condition would account for the various symptoms, sensory and trophic, such as pain, tingling sensations, and the wasting of muscle supplied by the affected nerve, and also those supplied by the small sciatic, when the disease affects the lower protion of the sac ral plexus. The author, in view of his lack of opportu nities for post mortem examination, quotes from Dr. Gowers: "In most cases that have been examined dis tinct evidence of neuritis has been found, chiefly involv ving the nerve-sheath, but extending in some cases into the interstitial tissue In recent cases there are small hemorrhages, and in seven cases similar but slighter alterations in the interstitial tissue with secondary dam age to the nerve-fibres. The signs of inflammation are most intense at the sciatic notch and opposite the middle of the thigh. They may be limited to one or both of these places, or they may be greatest there and extend in slighter degree over a considerable tract of nerve. Considering this to be the true pathology of sci atica, the treatment by acupuncture is a rational one, more especially in the earlier stages of the disease; but even in later stages puncturing the thickened nerve sheath may promote absorption. If the nerve is pierced in a number of places over the inflamed area, where there is congestion of vessels and consequently exuda tion of serum and small-celled infiltration, it must be

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given an outlet, however small, to more or less of the exudation; also dilated blood- vessels must be pierced, thus relieving tension in two ways and favoring the process of absorption. Rest is necessarily most essential, as it is in other inflammatory conditions. A rheumatic or gouty diathesis should be treated by appropriate remedies, as they are often a predisposing cause. The more chronic the sciatica the more difficult is the cure, as organization of the effused material must be a source of irritation and a nidus for subsquent relapses. In cases of secondary sciatica, due to rheumatoid arthrits of the hip-joint, a slight temporary relief only is obtained by acupuncture, as the source of irritation cannot be eliminated. Whether this irritation is due to pressure of the enlarged capsule of the joint on the nerve or to the changes in the joints, given rise to a neuritis of the nerve-fibres supplying the joint, and spreading from there to the trunk of the sciatic nerve, is a point requiring investigation.

In conclusion, if every case of sciatica, beginning acutely or subacutely, were to be treated by absolute rest, together with acupuncture, repeated, if necessary, at intervals of a few days, and at the same time any rheumatic or gouty tendency were treated by suitable remedies, the author dose not think there would be the number of chronic and relapsing cases that one so often sees.—*Ther. Gaz.*

Obstetrics and Gynecology.—Dr. E. S. McKee, of Cincinnati, Secretary Mississippi Valley Medical Association (Atlanta *Med. and Surg. Journ.*), says: Asthma Sexuale is the subject of a very interesting and instructive article by Peyer in the *Berliner Klinik.* Sixteen cases were reported *in extenso*, eleven of which were males and do not concern us in this report. Of the five female patients all suffered more or less from nervous or hysterical troubles which, like the asthma, depended upon the uterine difficulty. In all there was emphysema which caused no great inconvenience. In some of them the sexual act was with such regularity followed by asthma, that the connection between the two was quite clear. The author insists that we should not overlook the importance of the knowledge of the exciting influence of the genital system upon asthma. We should learn if our patients had suffered from nocturnal incontinence of urine. If sexual abuse had been practiced in youth, or sexual diseases contracted. The menses, their duration, the molimen, the fluor albus and pain in the lumbar region must be inquired after. If by questioning a leader is gained, then a sexual examination should be asked for. Sexual asthma is naturally not so stubborn as some other kinds. In two young married women, among his cases reported, coitus caused violent attacks of asthmatic sneezing. In another case, the patient suffered from a uterine fibroid with severe asthma, which disappeared after the removal of the tumor. Another was subject to asthmatic attacks which disappeared when she became pregnant. Another suffering from chronic metritis, the cure of the uterine affection relieved the asthma. In all the reported cases, the patients were more or less hysterical and there was a distinct history of necrosis in a family of two of them. The possibility of coincidence should be remembered. It is easy to understand that any aggravation of the uterine or of the ovarian disease and any irritation of the sexual functions might intensify the asthma. The author thinks the treatment of sexual asthma depends upon its origin. The physician should not neglect, through false prudery, to call attention to the bad results of onanism and coitus imperfectus.

Courage and caution in the treatment of abortion is a title which means very much. Just when to be brave and just when to proceed with care is a question which requires not only knowledge and experience but conscience. Of all my recent readings on this subject none have proven so valuable and so well repaid me as the article reviewing the subject during the past year, by Dr. Theophilus Parvin, in the Annual of the Universal Medical Sciences for 1889, and no one is more the embodiment of courage and conscience than this author. Ecouvillonage, so successfully advocated by Doleris in the treatment of incomplete abortion, has gained much in the eyes of the profession. Strict antiseptic precautions are observed throughout. Frey advocated electricity as a substitute for the curette in incomplete abortion. For the immediate removal of the retained secundines the faradic current is used, and the galvanic if they have been for sometime retained. Dioviburnia, made by the Dios Chemical Co., of St. Louis, has given excellent results in my hands in those cases where conservative action was necessary. In one case the patient made desperate attempts to bring on a miscarriage at the seventh and eighth months and seemed about successful, but in both instances the Dioviburnia in dessertspoonful doses, four times a day, tided the patient over her trouble and a fine boy was born at full term.

Antisepsis in Obstetric Practice.—Dr. W. H. Mays in the *Pacific Medical Journal* enumerates the following chief antiseptic measures to be observed in ordinary labor:

1. At the onset of labor the external genitals should be cleansed thoroughly with hot water and soap, and washed afterwards with a 1 to 5,000 bichloride solution.

2. Should an ante-partum vaginal douche be indicated, a hot 1 in 5,000 solution should be gently streamed through the nozzle of a fountain syringe; first into the anterior, then into the posterior pouch of the vagina. Of course this must be done before the rupture of the membranes. Some boiled water should afterwards be injected, that there may be no absorption of mercury.

3. Frequent examinations should be avoided. The hands of the physician should be washed in the above solution before and after every examination.

4. Apply napkins wrung out of the solution to the child's head as it emerges from the vulva.

5. See that the external genitals are bathed carefully in the same solution soon after delivery, and at least

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twice a day afterward. After each bathing and douching an antiseptic pad must be applied so as to cover the vulva, reaching to the mons.

6. After the second day commence the daily vaginal douche, consisting of one to two drachms of carbolic acid to the quart of hot water. This may be repeated twice a day, if necessary, and should be continued till the lochial discharge stops. In normal labor, no attempt should be made to douche the uterine cavity.

7. The strictest precautions as to cleanliness should guard all these manipulations. The nozzle and tube of the syringe should remain in a disinfecting solution when not in use.

The above and easily applied measures are not new but are unfortunately not observed by the general practitioner of the day.

The excuses for not observing these rules are varied and numerous. Not long since we were called in consultation in a case of tedious labor and asked for a basin of warm water and soap to cleanse our hands before examining the patient, when we were surprised by the attending physician saying, "Go ahead doctor and exam ine her, the water and soap will be here by the time you are through with your examination." Has this practitioner ever had a case of septicemia follow par turition? If not his guardian angel has ever been true to her trust in watching over him. W. B. D.

Case of Presentation of Funis; Successful Reposition.—Under the above caption, Dr. J. P. Tildesley, M.R C.S., Eng., etc. (London *Lancet*), relates a case in which Sim's position was used for the purpose of reposition of the funis and relates it as follows:

"I venture to record the following case as being one of interest (1) from the rarity of its occurrence—1 in 245 deliveries (Churchill) and 1 in 254 (Scanzoni)—and (2) from the still greater rarity of a successful result as regards the life of the child. I was called a few days ago to see a married woman, aged thirty five, multipara, who had four children living, the previous labors having been instrumental. On abdominal palpation I found the axis of the child to be longitudinal, the breach being felt at the fundus and the back directed to the right. On vaginal examination the os was found to be fully dilated, the membranes were unruptured and a knuckle of funis was left in front of the presenting part. The patient was placed in Sim's semi-prone position on the opposite side to that on which the cord had descended. She was kept in this position and on examining her again after two or three pains the funis had receded. She was now fully anesthetized, and the membranes were ruptured, the result, unfortunately, being a sudden gush of liquor amnii, leading to a prolapse of the cord. Pulsation was only very feebly distinguishable. Still maintaining the semi prone posture, with the hips elevated, the hand was introduced into the vagina and the loop of the cord was pushed up by the fingers above the head, the external hand then making pressure on the fundus. Simpson's forceps were applied and the head was rapidly delivered, the child being extracted in a condition of grave asphyxia. Restoration was attempted by alternately dipping in hot and cold water, but without success. The air passages being cleared of fluid by suction, Schultze's method was employed and was rapidly effectual in restoring animation.

"Remarks.—The following points are worth noting: (1) The absence of any pelvic deformity or any malposition of the fetus, an unusually long cord being the only recognizable cause of the prolapse; (2) the great ease with which reposition was effected without resorting to the genu-pectoral position; and (3) the advisability of rapid delivery and repeated attempts at restoration, even though pulsation may have apparently ceased in the funis."

Many rules for the management of these troublesome cases have been laid down in the current text-books of the day and not a few instruments have been invented by which reposition *may* be had recourse to; but rules and instruments even in the hands of good practitioners do not always save the life of the infant. Every case is a law unto itself. Rapid delivery when accomplished skillfully and when the head is not hydrocephalic is probably the best and quickest way out of the trouble. In breech presentations this can be accomplished with more facility than in vertex presentation. During the writer's experience he has had six of these cases, four of which were delivered without the loss of life of the infants. Dilatation of cervix followed by application of forceps early is about the quickest and safest method to be followed. W. B. D.

Trendelenburg's Posture.—Dr. H. C. Coe, in the current number of the New York *Polyclinic*, calls attention to the danger of secondary hemorrhage following laparotomy with patient in this position. The elevation of the hips determinates the blood toward upper portions of the trunk and oozing from small vessels in broken adhesions does not take place until the patient is again placed in the dorsal position. He cites two cases of celiotomy in which the patients came near bleeding to death from this accident. The abdomen had to be again opened and after much difficulty the hemorrhage was checked. It can well be seen that even many small arteries may not bleed while in this position, but when the patient is again returned to the dorsal position much blood may be lost. Aside from this objection the fact that the respiration is seriously impaired by the weight of abdominal viscera on the diaphragm is another serious objection to the posture. It is true, however, the surgeon has a view of the pelvic viscera with the patient in this position that cannot be obtained otherwise, and that the intestines do not get out of the abdomen with the same facility as with the patient in the dorsal posture, but in our judgment this advantage is far outweighed by the dangers cited above. W. B. D.

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Ureterectomy.—Dr. Reynier reports a case in which he removed the whole of one ureter. The patient first came under treatment in April, 1892, when he gave a history of typhoid fever in February, 1891, and two months later more pain in the lumbar region, followed by albuminuria and then pyrexia (*Brit. Med. Journ*). The urine was purulent at intervals, and micturition painful. At this time the existence of a pyonephrosis on the right side was diagnosed. On May 27, nephrectomy was performed, when the kidney was found to be a purulent cyst. The peritoneum was opened at the operation, but was returned without allowing local infection to recur. The ureter was fixed in the lower part of the wound. Fifteen days after the operation pus still flowed from the end of the ureter in the wound, the temperature still remained raised, and on cystoscopic examination drops of pus were seen exuding from the opening of the right ureter. Washing out of the ureter was next practised, but without any result. A further operation was now performed. The lumbar wound was enlarged, and 12 ctm. of the upper end of the ureter removed. The fistula still remained and no good results followed On November 18, an incision was made in the right inguinal region, and the peritoneum stripped up until the remains of the ureter were reached. It was dilated even to its junction with the baldder. The whole of the ureter remaining was now removed. On the following day pus had disappeared from the urine. On January 21, 1893, the patient was discharged completely cured According to the author, this is the first case of complete removal of one uteter. He recommends that when ureteral accidents occur after nephrectomy, especially in tuberculous cases, the affected ureter should be completely removed by an inguinal incision and stripping up of the peritoneum.

Unilateral Paralysis of the Recurrent Laryngeal Nerve from Implication in Tuberculous Glands.—Finlayson (*Arch. of Ped.*) has reported the case of a girl, four and a half years old, who presented a peculiar cough, resembling the most extreme form of hoarse cough met with in aneurismal disease complicated with laryngeal paralysis. Examination of the larynx disclose an absence of swelling, ulceration, or other mordid condition of the laryngeal mucous membrane. There was, however, abductor paralysis of the left vocal band, which remained fixed in the middle line, while the right band moved freely. The symptoms and physical signs pointed to consolidation and softening from tuberculous disease, the left lung being particularly involved. In the absence of tuberculous disease of the larynx, the conclusion was arrived at that the case must be one in which the recurrent laryngeal nerve had become pressed upon by enlarged bronchial glands or involved in pleural adhesions. The child was extremely rhachitis and the family history was strongly tuberculous. The peculiar cough continued, utterrance being given to curious hoarse, whining cries when anything was wanted. The child spoke little, but the voice was not specially hoarse. The temperature was at time high, but extremely low temperature were also frequently found. On one occasion fluids were returned through the nostrils. No test for anesthesia were employed but it was noticed that the irritation caused by the laryngeal mirror was remarkable well borne. After an illness lasting about five months, as far as cough was concerned, death took place. Upon post-mortem examination both lungs were found to be tuberculous. The left pneumograstic nerve was adherent to a much enlarged and caseating gland, but could be traced down to the level of the root of the lung without much apparent alteration of structure. The recurrent laryngeal nerve was intimately connected with and involved among some caseating lympathic glands almost from its origin, so that it could only with difficulty be traced around the aorta. It appeared to be spread out and its substance involved in the infiltration. The pericardium was completely beset with yellow tubercles. There had been a partial organization of tissue between the visceral and parietal layers. The parietal layer presented small, white tubercles, scarcely at all ceseous. There were also extensive adhesions between the peritoneum and the omentum.

Diabetes and Cirrhosis of the Liver.—Palma (*Ber. klin. Woch.*), describes two such cases from the clinic of v. Jaksch.

1. A man, age 78, had suffered from increasing weakness for eighteen weeks. The skin was of a brownish color. There was considerable hepatic and splenic enlargement. The urine contined much grape sugar, but no bile pigment. The case is described as one of hypertrophic passing into atrophic sirrhosis.

2. A man, age 43, began with slight jaundice 4 months previously. Two months later the abdomen began to swell, and, then the legs. Ascites was present. The liver and spleen could not be felt. The urine contained grape sugar and occasionally, acetone, as well as bile pigment. A month later he died. The liver was found to be cirrhotic, the kidneys enlarged and the pancreas healthy. The liver only contained a small quantity of glycogen.

In such cases either the sugar-forming function of the liver is increased, and too much sugar gets into the blood, or the liver is not in a position to convert the sugar brought to it into glycogen. The question of alimentary glycosuria must also be considered. Here the limit for the assimilation of carbohydrates is diminished, and a permanent glycosuria may result. The effect of alcohol in this respect has been insisted on. The author drawn attention to the pigmentation seen in his case, and refers to the condition of "bronzed biabetes." He concludes by pointing out (1) that the coexistence of these two diseases is very rare; (2) that the liver disease cannot as yet be looked upon as the cause of the diabetes, and that the latter may be a chance complication; and (3) that the name bronzed diabetes should

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not be used, as pigment may be absent from the internal organs in such cases, and ordinary cirrhosis without diabetes this accumulation of pigment may also be pres ent.—*Br. Med. Journ.*

The Pathogenesis of Hepatic Abscess.—In the course of experimental observations, Zancarol (*Revue de Chir.*) found that the injection of dysenteric stools of a cat, containing emedæ, into the intestine of twelve other cats, was followed in six cases by the presence of streptococci; in 11 of the cats dysentery developed, in 7 with amebæ in the evacautions and in 4 without emebæ. In the intestines of these animals was found the ulceration characteristic of dysentery. In none of the animals were amebæ found in sections of the bowel, while in 11 of the 12 streptococci were found in the depths of the intestinal mocous membrane. The injection of hepatic pus, sterile by culture, into the rec tum in 7 cats was followed by the development of abscess of the liver in 2, purulent infiltration in 3, and dysentery in 4. The injection of pure cultures of streptococci from these inoculated animals into the intestine in two cats caused dysentery in one, with recovery after the lapes of forty-four days, and dysentery in the other, with death after the lapse of sixty-seven days. Upon post mortem examination ulceration of the large intestine was found, together with cicatrices and streptococci in lungs and liver. Injection of a pure culture of streptococci into the ischio-rectal fossa of a cat was followed by the development of dysentery. Upon post-mortem examination a peritoneal effusion was found, with ulceration and edema of the walls of the small intestine. A pure culture of streptococci was obtained from the blood of the liver, as well as from the blood of the heart, the pericardium, the gall-bladder, and the peritoneum. Injection into the intestine of dysenteric stools from man, containing amebæ, was followed by the presence of amebæ in the intestine, but after death by the presence of streptococci in the spleen. The large intestine was in a state of exfoliation and congestion.—*Med. News.*

Hypodermatic Alimentation.—Caird (Edin. *Med. Journ.*) has reported the case of a man who for three years had suffered from gastric catarrh and had received great relief from washing out his stomach. For five months there had been increasing difficulty in taking solid food and in passing the stomach tube. Finally, only fluids could be taken; and on examination a stricture was found at the cardiac extremity of the esophagus. Gastrostomy was proposed, but declined on account of the great weakness and emaciation. Nearly twenty-five pounds had been lost in two months. The temperature was rather subnormal. But little of the fluid taken by the mouth was retained, the greater part being rejected. Some nourishment was administered by the rectum. In the hope of increasing the strength and securing sufficient improvement to warrant the performance of gastrostomy, the subcutaneous administration of sterilized olive oil was begun. Intramuscular injections in the gluteal region caused no discomfort, and for a week the patient received three or four ounces in this manner, experiencing appreciable benefit; so that gastrotomy was undertaken under the local ansethetic influence of cocaine. The operation was unattended with shock of pain. The stomach was opened with a tenotome, and a catheter was introduced for feeding purposes. The patient's temperature rose a couple of degrees after the operation, but he did not improve as had been anticipated, and in six days he suddenly collapsed and died. Upon post mortem examination an annular epitheliomatous stricture at the cardiac extremity of the esophagus was found. There was also some thickening and ulceration about the pylorus, one of the ulcers having given way into the peritoneum.—*Med. News.*

The Passage of Fat into the Urine.—The conclusions drawn by Chabrie from the facts which he has gathered are, that the passage of fatty substances into the urine may be due to a variety of causes which he tabulates under four heads.

1. The presence in the blood of a parasite, the filaria sanguinis hominis. Investigation has shown here that the function of the kidney relative to the secretion of its normal constituents is not modified.

2. Certain pathological states, and in particular that of a form of Bright's disease. The lipuria is always very light.

3. The ingestion of quantities of fat.

4. Intestinal retention. In this case it is necessary to distinguish between the effects produced by an experimental or pathological ligature in man or in the dog. In the first, a retention of twenty-four hours is sufficient to produce the passage of fat into the urine; in the latter forty-eight are required. The author's theory is that this form of lipuria is produced by the resorption of bile, and he has produced it by injection of bile into the abdominal cavity of animals. Chyluria may be, therefore, a disease of the liver.—*Journ. of Cuta. and Gen. Urin. Dis.*

Therapeutic Effects of Altitude.—Dr. de la Harpe divides altitudes into three principal zones: 1. The sub-Alpine zone, between 700 and 1,300 metres; 2, the Alpine zone, up to 1,900 meters; and 3, the hyper-Alpine zone, above that height. The first of these is considered most suitable for invalids suffering from cardiac affections, atheromatous changes, those advanced in years, and excitable subjects, while a higher altitude gives excellent results in tuberculous, amemic, and neurasthentic cases. With regard to the properties of the mountain air, the chief factors of the climate mentioned are: 1. The lowering of the temperature, at the rate of 1° for every 170 meters in the Alps; 2, the energy of insolation; 3, the dryness, and 4, the purity of the air; 5, diminished atmospheric pressure. Those unaccustomed to the climate of these altitude must becom acclimatized; the process takes some days, perhaps a week,

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during which the appetite increases, thirst is intense, respiration more frequent, the number of cardiac pulsations augmemted, and the blood-pressure diminished. The quantity of air inspired increases, as also the amount of carbonic acid expired. Insomnia is at times very troublesome. Frequent palpitations and dyspnea occur, especially in cardiac, anemic, and fatty subject. Once acclimatization is complete the sleep becomes natural, but the quantity of inspired air as slightly increased, while the blood is found to contain more corpuscles. This diminished atmospheric pressure exerts an influence on the circulation, accelerating it and raising the blood-pressure and tension of the pulse; the blood-vessels are fuller and nutrition is improved, thus affording excellent conitions for the treatment of anemia and feeble cardiac innervation. The action of the dry and pure (free from microbes) air makes itself especially felt in certain pathological conditions; for example, the pus of suppurating, tuberculous, or pleural cavities undergose diminution, the favorable process of sclerosis of the tissues surrounding the cavities is accelerated, and the cold of high altitude rendered more supportable.—*Brit. Med Journ.*

Gall-Stone in the Intestines.—There are large numbers of cases on record in which obscure cases of intestinal obstruction have proved to be due to the impaction of gall stones at some part of the intestinal tract. These cases are interesting from several points of view, and especially on account of the difficulty in diagnosis which many of them present. Of course when one has to do with a patient who is known to have suffered from jaundice or from occasional attacks of biliary colic, the possibility of the obstruction being caused by the impaction of such calculi must occur at once to the surgeon; but except in cases where the obstruction is due to the agglomeration of several freshly formed calculi, there is often a curious absence of previous symptoms pointing to calculous formation. Yet in these very cases the stones are frequently of considerable size, so large in fact that they could not possibly have passed through the common bile duct by any conceivable degree of dilatation. They have indeed ulcerated through the gut by a slow necrotic process devoid of painful manifestations. Under these ciscumstances an exact diagnosis must be difficulty not to say impossible. The matter is, however, of some importance, because one is, of course, anxious to spare the patient the danger attending so serious an operation as laparotomy with incision of the gut, the more so seeing that a very large proportion of such cases are emenable to medicinal and general measures. It is probable that the failure to elicit the history of previous symptoms of hepatic colic is sometimes due to the inquiry being restricted within too narrow limits. It is indeed necessary to go far back in the patient's history to obtain the desired date, which may have been forgotten or overlooked. Fortunately the effect of surgical intervention in the more urgent cases is very satisfactory, provided it be had recourse to in good time.—*Med. Press.*

MEDICAL SOCIETIES

[We are indebted to the New York *Med. Journ.* for the following abstract of papers read before the Mississippi Valley Medical Association, October 4–6, 1893.

Fibroid Tumors of the Uterus. — This was the subject of the President's address. After giving a definition of these tumors, the author dwelt upon their etiology, which he said was still a mystery. They were more frequent in the black than in the white race. In both races they were more frequent in the body than in the neck of the uterus, and more frequently situated in the posterior than in the anterior wall. After the menopause was established these tumors generally disappeared, unless they had undergone cystic degeneration. Bearing on this point the President reported an anomalous case. The patient was forty three years of age; she had never menstruated in her life, had never shown any physiological evidence of ovulation, had been twice married, and was then a widow and childless. She had for ten years had a large fibromyoma of the uterus, which thus far had given no evidence of atrophy.

With regard to the pathology, the tumor always had its origin in the substance of the uterine wall or in the subperitoneal connective tissue.

The symptoms accompanying the presence of these tumors in various localities and stages of growth were widely different. However, there were vague pain in the pelvic region; pain referred to the front or back of the leg; irritability of the bladder or rectum; uterine tenesmus; menorrhagia or metrorrhagia; dysmenorrhea; profuse leucorrhea; and a serous discharge from the uterus. The diagnosis of very small fibromyomata, when many of the leading symptoms were absent, was considered extremely difficult.

So far as the medical treatment was concerned, but little could be done for the relief of patients suffering from fibromyomata, and nothing for those suffering from tumors that had undergone cystic degeneration. Surgically, there were but two routes by which solid uterine tumors could be removed—the vagina and the abdominal wall. With the exception of small tumors with a well-defined pedicle, all subperitoneal fibromyomata could be reached only by section of the abdominal wall. The President had in one case divided the posterior wall of the vagina and through this opening removed the tumor.

Forensic Medicine.—This paper was read by Dr. C. G. Comegys, of Cincinnati. The author had come to the conclusion, from his experience, that there were but few lawyers sufficiently informed in medical science to conduct a case in the interests of truth and justice, especially the most important cases in medical jurisprudence. Every physician, as an expert witness, must have observed the embarrassment of lawyers in trying medical cases. They asked questions enough, but, from their

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lack of medical experience, they were incapable of thoroughly understanding the answers of a witness, so that the proper interpretation of them bearing upon the history of a case at the bar might be reached, and, when endeavoring to give the court and jury clear views of the subject by additional questions, they often confused the whole investigation. This disagreeable state of affairs was usually brought about by certain lawyers who had armed themselves by a superficial study of medical works for the occasion. Dr. Comegys believed that the high order of legal men would welcome well-trained men in medicine as coadjutors in the lofty work of establishing justice.

Problems of Public Interest Concerning the Insane.—In a paper thus entitled Dr. Orpheus Everts, of College Hill, Ohio, said there were several problems of public interest involved in the present relations of society to the insane. Among the more important of them were questions of dependency and curability of the insane and the preventability of insanity. The author summarized his conclusions as follows:

1. Intelligent provision for the insane implies provision for various classes, according to the capabilities of enjoyment and the exercise of variously impaired faculties.

2. Public provision for whatever class of insane persons implies housing, clothing, food, sanitary and moral discipline, amusement and employment for such as are capable of being amused and employed, and medical treatment for the sick. The essential features of such provision are adaptability to the needs of each distinctive class.

3. Great, expensive, architecturally imposing palaces, providing alike for all classes, however serviceable they may have been, esthetically considered, in times past, as they unquestionably were, are no longer necessary or appropriate to the needs indicated. So long as the insane are comfortably housed, each class according to its condition, it is comparatively unimportant whether it be in large or small houses, cottages, or palaces, connected or detached, in high or low buildings.

4. It is important that the insane of all classes be well fed under careful supervision; but whether in small or large dining rooms, by groups or congregations, is of little consequence; it should be a matter of convenience rather than of number.

5. It is important that public institutions for the insane be well organized and administered.

6. It is wise to retain in office capable men, who have demonstrated their fitness by successful management of affairs, so long as their capabilities continue to be elastic.

Chorea in its Relation to Rheumatism.—This paper was contributed by Dr. I. N. Love, of St. Louis. The author said that recently the pathology of this disease had been cleared up to a very considerable degree. It was a definite affection and one especially incident to childhood. The author reported a case of chorea occurring in his practice with a marked history of rheumatism, one of ten cases illustrative of this class observed by him. The cases had not occurred successively. Between them other cases had presented themselves lacking the rheumatic history, but four of the number had occurred in rapid succession, with a pronounced rheumatic history. Seven of the patients had been girls.

Among the exciting causes of the disease were irritation in the nostrils and adenoid growths in the vault of the pharynx. Inasmuch as Kirkes, Tuckwell, Hughlings Jackson, and Bastian had supported the embolic theory of the disease, and in consideration of the fact that chorea was so frequently associated with endocarditis, we should be on the alert to interrogate the heart when called to a case of chorea. As matters now stood, we had numerous exciting causes resulting in chorea.

Chorea, its Pathology and Treatment.—This paper was contributed by Dr. H. M. Lash, of Indianapolis. So much uncertainty had existed regarding the pathology of chorea that its treatment had been varied and widely different in its character and aims, amounting even to empiricism. The author then gave the causes of chorea as laid down in the recent work on nervous diseases by Dr. Landon Carter Gray. He referred to the repeated experiments of Dr. H. C. Wood, who had announced his conviction that the choreic movements had their origin in the spinal cord and were directly due to paralysis or depression of the inhibitory function of the cells. Acting on the strength of this conviction, Dr. Wood had sought for a remedy that would strengthen the proper function of these cells, and he had it in quinine.

Dr. Lash then reported a case of acute chorea in a boy thirteen years of age. The choreic movements had been constant, general, and pronounced. It was agreed to try Dr. Wood's suggestion, and so the patient was put on full doses of quinine. Twenty grains a day, in four doses, were given him for three days, when he showed considerable improvement. The quinine was increased to twenty-five grains a day and given in that amount for three days more, when the patient again reported. There were no remaining symptoms of the chorea, and the quinine was gradually withdrawn. The patient had remained entirely free from the trouble ever since, and without any subsequent treatment of any kind. Another similar case with a successful result was reported.

Diphtheria; its Specific Diagnosis.—This was the title of a paper read by Dr. J. C. Culbertson, of Cincinnati. The author said that this disease was of peculiar interest because of its treacherous and insidious character. The uncertainty of diagnosis had caused some excellent practitioners to adopt the pernicious habit of diagnosticating and treating all cases of sore

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throat, whether simple or malignant, as if they were true diphtheria. True, the treatment designed for a diphtheria might cure a quinsy, but inestimable harm might be done by causing unnecessary alarm on the part of the patient's family, together with the inconvenience that accompanied isolation of the patient and quarantining of the family, to be followed by the mockery of disinfection of non-infected apartments, and perhaps destruction of clothing and furniture. On the other hand, a case of diphtheria diagnosticated as one of amygdalitis might be the cause of breaking up a school or producing an epidemic, with an indefinite amount of sickness and many deaths. A case was cited in point.

Dr. Culbertson then referred to the importance of utilizing the science of bacteriology, and mentioned the plan adopted by the New York City Board of Health of having undertaken to make bacteriological examinations for all practitioners of medicine in that city free of charge.

A Treatment Giving a Low Death-Rate in Cases of Diphtheria in Hospital and Private Practice.—Dr. William A. Galloway, of Xenia, Ohio, read this paper. The paper embraced reports from private practice of physicians who had given the treatment faithful trial during the past three years, who had unhesitatingly commended its value and had all been able to show a death-rate below ten per cent. Immediately the nature of the disease was suspected, the writer gave a grain of calomel for each year of the patient's age up to eighteen, repeated the dose in from four to six hours, and met the action of the mercurial with copious hot-water injections. This treatment was persisted in until the full action of the calomel on the liver and kidneys was obtained, relieving these two important excretory organs of the paretic condition caused by the absorption of the toxalbumin product of the Klebs-Loeffler bacillus. Improvement in the patient's appearance was immediate when the mercurials acted freely. The quantity of foul-smelling grass-green dejecta resulting was astounding. There was no fear of salivation, as under the most heroic use of mercurials no symptom of salivation had been observed by the writer or his friends. Internally, corrosive sublimate was given up to one eightieth of a grain, with full doses of tincture of chloride of iron and alcohol hourly at night and during the day. The topical treatment consisted of the use of peroxide of hydrogen for cleansing the throat, while as an escharotic a solution of twelve grains of salicylic acid in a drachm of alcohol might be used twice a day by the physician only. It had proved of great value in the writer's hands. This escharotic was very powerful and should be used carefully.

Now is the time to subscribe for the **Medical Review.**

NOTES AND ITEMS

A Diploma Dealer Sentenced.—Dr. Walter May Rew, of New York, whose bogus medical college was exposed last July, was sentenced October 10, to three months' imprisonment in the penitentiary.

The Eighth International Congress of Hygiene and Demography will be held at Budapest, late in August or early in September, 1894, under the patronage of the Emperor of Austria.

Mutter Lectures.—The Mutter Lectures this year will be given by De Forest Willard, M.D., at the Hall of the College of Physicians in Philadelphia on Tuesday evenings from October 17, to December 19. The subject is "The Surgical Pathology and Surgery of the Spinal Cord, the Vertebræ and Peripheral Nerves."

Cholera at New York.—Te outbreak of cholera on board the steamer Russia which arrived in New York October 9 from Hamburg with two cases of cholera on board, there having been five deaths on the voyage happily proved of short duration, and while one passenger died after her arrival at quarantine, no new cases developed.

A Large Ovarian Cyst.—A case reported by Dayot, in the *Archives Provinciales de Chirurgie*, of a young girl operated for an ovarian cyst of which she had been aware for three years. Fifteen litres of ascitic fluid were removed and the tumor which contained sixty-five litres weighed all told ninety kilogrammes while the patient weighed but thirty. There were numerons parietal adhesions, but fortunately none to the viscera.

The Biography of Ephraim McDowell.—We are notified by the publishers of "The Biography of Ephraim McDowell," (*Med. News*) that the book is out of print. Both they and we have received numerous complaints from persons who have paid a supposed agent in advance for the work and have failed to receive it. We advise against any business with a traveling agent, and especially against paying in advance for a copy of the work.

Self-Sacrifice.—The Boston *Medical and Surgical Journal* says: To the unthinking, the surgeon at the operating table or the physician in the wards for infectious diseases is only a man pursuing his profession. But under the impassive exterior will be found "the stuff of which martyrs are made." He holds his life none too precious to be sacrificed, if need be, in relieving humanity's physical suffering, and surely "greater love

hath no man than this, that a man lay down his life for his friend.

Cholera Riots in Hamburg. — Several fatal riots have occurred in Hamburg this month growing out of attempts by the authorities to enforce sanitary regulations. They occurred in the suburbs among the poorest and dirtiest classes whose uatural abhorrence of cleanliness allowed no extra sanitary measures to be enforced. The health officers, who were accompanied by the police, were surrounded by the crowd who attacked them with clubs and stones. In the last riot two officers were killed and their bodies trampled almost beyond recognition. A company of troops with fixed bayonets finally dispersed the mob. This opposition to the improved sanitation and the flaw in the filtering beds by which the Elbe water was mingled with that already filtered have accounted for the slight increase in the number of cases.

Alvarenga Prize of the College of Physicians of Philadelphia.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income of one year of the bequest of the late Senor Alvarenga, and amounting to about one hundred and eighty dollars will be made on July 14, 1894, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the Secretary of the College, Dr. Charles W. Dulles, on or before May 1, 1894.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelop having on its outside the motto of the paper and within it the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

A Treatise on Ophthalmology for the General Practitioner. Second edition, revised and enlarged, with 140 illustrations, by Adolf Alt, M.D. J. H. Chambers & Co., Publishers and Dealers in Medical Books, St. Louis, Mo. 1893.

The author of this treatise has accomplished what he had in view—the publication of a practical work on diseases of the eye—a book that will be of great service to the student and practititioner. It is essentially an aid to both, without requiring the aid of other books to be understood. The treatment of every subject is so clear that a child can understand it. In the beginning, he gives the anatomy of the eye and adjacent parts, with beautiful illustrations, and in the next chapter gives his methods of examining the eye. Then follows a systematic presentation of the diseases and injuries of the different structures. Asepsis and antisepsis receive due attention, while the drugs most in use in the treatment of diseases of the eye are enumerated. On the whole, it is a book that we cordially endorse.—*Medical Era.*

Effects of Tobacco on Physical Development at Yale and Amherst.—Statistics on this controverted subject are rare (*Med. Rec.*). The following remarks are by Dr. Jay W. Seaver, of Yale, a reliable authority. They are based upon observations made of a college class of one hundred and eighty seven men during their first and final years. The growth of the men in four of the principal anthropometrical items, of varied character, is as follows:

	Weight. Pounds.	Height. Inches.	Chest Girth Inches.	Lung Capacity. Cubic inches.
Non-users	11.87	.894	1.74	21.6
Irregular users,	11.87	.788	1.43	14 45
Habitual users,	10.66	.721	1.276	12.17

If this growth be expressed in the form of percentage, it will be seen that in weight the non-user increased 10.4 per cent more than the regular user, and 6.6 per cent more than the occasional user. In the growth of height the non-user increased 25 per cent more than the regular user, and 14 per cent more than the occasional user. In the growth of chest girth, the non user has an advantage over the regular user of 26.7 per cent, and over the occasional user of 22 per cent, but in capacity of lungs the growth is in favor of the non-user by 77.5 per cent when compared with the regular user, and 49.5 per cent when compared with the occasional user. It has long been recognized by the ablest medical authorities that the use of tobacco is injurious to the respiratory tract, but the extent of its influence in checking growth in this and in other directions has, I believe, been widely underestimated. Dr. Seaver's conclusions in regard to the dwarfing effect of tobacco are fully corroborated by the following statement by Professor Hitchcock, M.D., of Amherst College, more recently published: "The matter of tobacco smoking as an influence upon the physical development of Amherst students has been studied in the history of the class of '91. Of this class 75 per cent have increased in their measurements and tests during the whole course, while 29 per cent have remained stationary or fallen off. In separating the smokers from the non smokers, it appears that in the item of weight the non smokers have increased 24 per cent more than the smokers; in height they have surpassed them 37 per cent; and in the chest girth 42 per cent. And in the lung capacity there is a difference of 8.36 cubic inches (this is about 75 per cent) in favor of the non-smokers, which is three per cent of the total lung capacity of the class."

Action of Iodoform on Pus Microbes and on the Leucocytes.—Maurel, who is well known by his researches on the leucocytes, has undertaken to solve the problem, why iodoform, which is so efficacious in preventing or suppressing suppuration, should apparently have so little action on the pyogenic

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staphylococci (*Bulletin General de Therapeutique*).

He first experimented with a virulent culture (on gelose) of staphylococci in the presence of leucocytes. The latter speedily absorbed the staphylococci, but succumbed in less than two hours. In the control field, however, they accomplish their evolution and live from twelve to twenty four hours. Maurel finds that the death of the leucocytes under the influence of the pus micro-organisms is due to a toxine contained in the bodies of these microbes, not to the mechanical action of the staphylococcus or to the products which the latter yields up to its environment. Under the influence of these same staphylococci, the red corpuscles become diffluent in fifteen hours, then disappear.

Another series of experiments were made by subjecting the figured elements of the blood to the action of iodoform in the dosage of 0.10 to 2.50 per kilogramme of blood. Neither the smaller nor the larger doses were found to be toxic to the leucocytes; the vital activity of these latter was, on the contrary, augmented, and the action on the red globules was *nil.*

A third series of experiments showed iodoform to be without marked action on cultures of the staphylococcus aureus and albus.

In a fourth series of researches, Maurel subjected both the leucocytes of human blood and cultures of the staphylococcus to the action of iodoform in varying proportions and under varying condition. His conclusions are as follows:

Iodoform attenuates the virulence of the staphylococcus. While in the virulent state, this micrococcus kills our leucocytes in less than two hours—when it is subjected along with the leucocytes to the influence of iodoform, the latter preserve their movements for eight hours, at least, and even complete their evolution.

2. The staphylococci which have thus lost a great part of their virulence (and to such a degree that they are seemingly devoured by the leucocytes with impunity), keep all their reproductive energy unimpaired, so that virulence and the power of reproduction are independent properties.

A final conclusion is deduced that it is in both these ways—by augmenting the energy of the leucocytes and attenuating the virulence of the pus microbes—that iodoform opposes suppuration, which is, in the language of bacteriology, a massive slaughtering of the leucocytes. These teachings are in harmony with clinical experience as to the benefits of iodoform iu preventing or arresting suppuration.—Boston *Med. and. Surg. Journ.*

American Medical Journal Publishers' Association.—The executive committee of the American Medical Journal Publishers' Association has adopted the following commendable rules:

Rule 1.—The eligibility of a Medical Journal to membership in this Association shall be determined by the character of its reading pages which must at all times be kept free from such matter as is intended solely for the advancement of the financial interests of its publisher or advertiser; furthermore, all reading notices pertaining to such articles advertised shall have a place only under the heading of "Reading Notices" or "Publisher's Department." All such notices shall be paid for at the rates established by its publisher.

Rule 2.—The publisher of each Journal admitted to this Association must file with the Secretary a card of his advertising rates, naming such discounts as he allows Medical Colleges or other institutions where special rates are usually given, also discounts allowed reputable advertising agents. In the latter case, commissions shall not exceed twenty (20%) per cent, and such card of rates are to be net and must be universally sustained.

Rule 3.—Members of this Association shall not accept business from any advertising agent who resorts to such disreputable or unbusinesslike methods as shall be condemned or pronounced as such by this committee.

Rule 4.—For violation of a rule of this committee a member may be fined in any sum not to exceed one hundred ($100.00) dollars, or may be expelled or suspended at the discretion of the Committee.

Rule 5.—An appeal may be taken by a member who has been subjected to the penalties set forth in rule (4) to the Association, at any regular meeting, and its decision shall be final.

Rule 6.—Every member of this Association shall report to its Secretary any violation of the constitution, by-laws or rules of this committee, also as to facts pertaining to the financial standing or the responsibility of any advertiser, probable advertiser or advertising agent.

Rule 7.—No member of this Association shall accept business from an advertising agent or advertiser who has been reported by any of our members until such delinquent has satisfied all claims of complainant. Notice of such payment shall be made promptly to the Secretary. Nothing in this rule shall preclude a publisher from completing a contract with such delinquent for the purpose of legalizing such claim.

Rule 8.—No rules or regulations of this Association shall prevent a publisher from completing a contract in hand at the time of becoming a member.

Rule 9.—It shall be incumbent upon each member of this Association to promptly notify the Secretary of any person or firm contemplating the placing of advertising in Medical Journals, and the Secretary shall transmit such information to the members of the Association.

Rule 10.—This committee may issue such bulletin or bulletins of information for advertisers or publishers as in their judgment will further the interests of the Association or its members.

Officers of the Association for 1893-94:—President, Dr. Landon B. Edwards, Richmond, Va.

Vice President, Dr. J. C. Culbertson, Cincinnati, Ohio.

Secretary, Dr. F. King, 218 E. 34th Street, N. Y.

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Next meeting, Cincinnati, O., Monday, Dec. 4, 1893.

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Bovinine is a preparation of the juices of lean, uncooked beef, prepared by a cold process. In it are preserved all the nutritive elements, as well as the salts and extractives, as such, having undergone no disintegration or decomposition. It is the most concentrated and nutritious food yet presented, and is prepared by the Bovinine Co., of New York, who will be glad to send samples on application, mentioning this journal.

A Remarkable and Important Poi:.t in favor of the Rudisch Beef Peptone (sarco peptones) is that the article will keep for years if the glass jar is uncorked (no paraffine is used) and for many months after the jar is opened, providing it is then left uncovered. It is claimed for the Rudisch Beef Peptone that the above is true of no other similar preparation; that indeed, no other article on the market consists solely of palatable predigested, soluble food.

William R. Warner & Co. Given the Highest Columbian Award.—W. R. Warner & Co., of Philadelphia, have obtained the highest prize for the purity and perfection of their medicinal and officinal standard pharmaceutical and chemical products.

This extensive firm have obtained hitherto twelve grand World's Fair prizes, and they must feel deservedly proud of the Columbian award, which is the highest of its class.

Neurasthenia, Chorea and Migraine.—In an experience of twenty years' practice of medicine I wish to state enthusiastically and truthfully that in the treatment of Neurasthenia, Chorea, Migraine and all of the Convulsive and Reflex Neuroses, I have found a "Specific" in the preparation called Neurosine. I am under the most profound obligations to a brother physician who brought it under my observation, as also my patients. F. O. BRAINERD, M.D.,
U. S. Pension Surgeon, Oakley, Kan.

Andunea has come to the front rank with surprising rapidity. Its therapeutic value is established and recognized. Merit alone has sustained this product. Andunea, by its positive and safe action, has from its vary inception been found a safe and reliable remedy in the treatment of all diseases accompanied with fever and pain.

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MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

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ORIGINAL ARTICLES

Abscess of the Brain.

BY R. L. JOHNSON, M D., ROLLA, MO.

Surgeon to St. Louis and San Francisco Ry.

Read before the First Annual Meeting of the Southwestern Association of Railroad Surgeons, St. Louis, Oct. 27, 1893.

In bringing before you a description of a single case of abscess of the brain, I have the consciousness that, although it may lack in detail, there is nothing added to embellish it—that it is not written either to establish or conform to any theory of pathologist or surgeon, but as an offering of facts. It is only by observing and reporting facts accurately, that data are accumulated from which general principles are deduced. No one surgeon has in his life enough cases of abscess of the brain to furnish all the data needed for the thorough establishment of rules of treatment; therefore it becomes the duty of every practitioner, to observe carefully and report accurately all cases coming under his observation. This becomes all the more a duty when we remember that these opportunities always imply suffering and risk of human lives and should therefore be carefully economized. That rules of treatment are not thoroughly established, I find from the recent literature of the subject and also from conversation with a good friend of mine an eminent surgeon in this City, who kindly told me I had not treated my case in the most approved style; for this I expressed my regrets; for had I done so, I might have been able to make my report more complete, by giving a description of the post-mortem appearances.

On November 5, 1892, I was called to see William M., aged fifteen years.

HISTORY AND SUBJECTIVE SYMPTOMS.—I was told that he received a blow upon the head, from an old lime-encrusted white wash brush, thrown at him, which had knocked him senseless for a while; that he had a slight dull headache and was somewhat constipated, and that he had been feeling badly for several days. I was only told of this accident after I had decided that he was suffering from a torpid state of the liver and bowels. Upon a careful examination of all objective somptoms, I found a slight depression an inch posteriorly to the external angular process of the frontal bone, a half an inch in length, over the portion contiguous to the sphenoid; the skin was not broken at all; the tongue was large and furred; his pulse rather slow and the temperature normal; he was dull and slow of speech, but perfectly intelligent; there was entire absence of paralysis, motor or sensory; his sight was good and the pupils responded equally and promptly to light. I gave a purgative and advised quiet for a few days and requested to be notified if he did not get well promptly. During the next two weeks he was not seen; he was at work, hard work, hauling stone. At the end of that time, after hard riding horseback, headache, which had troubled him some, became rather severe. He was given potassium bromide freely, which relieved it to a great extent. On the 30th and on the 1st, 4th and 9th of December I saw him and found him getting thin; his tongue coating more and more; his countenance dull and heavy, his speech slow, cerebration perfect but slow; answering questions slowly but correctly; headache most of the time; there was no fever at any time. Although his countenance and general appearance suggested typhoid fever, there was never any rise of temperature or increased frequency of pulse. On the 15th his pulse was below sixty and halting, a hesitating pulse; his bowels would not move without an active cathartic; no paralysis; pupils always responsive. On the 15th I insisted on consultation with reference to trephining. Dr. T. J. Jones, agreed as to the necessity of the operation, and Drs. Rowe and Carpenter were invited to be present and kindly assisted me.

A "Y" shaped incision having been made in the scalp the trephine was applied to the frontal bone just below thetemporal ridge and at a point corresponding internally with Broca's convolution. On attempting to elevate the depressed portion, it was found to be much comminuted, the fragments setting nearly at right angles to the plane of the skull; these fragments were carefully removed and the sharp edges of the skull were rounded off. The dura mater which was not torn and which was of a dark red color slowly rose up to its proper level, but did not bulge into the opening at all. To the touch it felt softer than the brain, suggesting the presence of some fluid under it, but it was neither tense nor elastic. On consultation it was not deemed advisable to open it

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then, as it could be done afterwards if he was not relieved. After the operation his general condition improved for a day or two; he became more cheerful and looked better, having lost the listless apathetic countenance. His pulse, however, continued as slow as before and his bowels remained constipated. On the night of the 19th, four days after the operation, it was observed that he did not use his left hand, which was not completely paralyzed, however, but so feeble that he could scarcely move it, while his grip was almost imperceptible. Paralysis of the left side of the face was now marked. Patellar reflex was absent (this was the case before he was trephined).

There is now also a partial paralysis of the left leg. The pupils remain responsive to light. There has never been any impairment of vision or of power to move the eyes. On the 20th I opened for about half an inch the incision, which had healed by first intention, and pressed with the end of the grooved director upon the dura mater, and was satisfied that it was now tense and elastic. I then used a fine trochar and canula twice the size of a large hypodermic needle, pushing it downwards and slightly backwards (as he lay) one and a half inches before I reached pus. I then pushed in a straight bistoury and upon turning it, pus flowed freely, "laudable pus." While it was flowing a rubber drainage tube was inserted one and a half inches into the wound and the pus continued to flow through and by it. The amount was estimated at three ounces, but it was not measured as it ran out freely on cloths and into the basin. The wound was dusted with iodoform; a thick compress of sublimate gauze was bound on; the drainage tube was brought through an opening in the compress and the end overlaid with sublimate cotton, and over all parafine paper. The relief from the operation was prompt. Before the opening of the abscess the pulse was forty-eight and he appeared deaf and would neither answer nor move. In fifteen minutes he was reviving, and before I left the house (about an hour,) he was smiling and talking freely and promptly. By the afternoon a remarkable change had taken place. Instead of a shrunken pale countenance he had some color; his lips were full and red and his pulse had gone up to eighty. The next day I attempted to syringe the abscess with a syphon, but there appeared to be but very small cavity, some small clots, a little pus, and what appeared to be lumps of soft broken down brain tissue. The next day only a little pus and bloody serum came away when I removed the tube which I replaced. A few days after, as there was no discharge through the tube, I dilated the opening with a grooved director and got a teaspoonful of pus. From that time there was no further trouble of any kind; his pulse fluctuated from sixty-five to eighty-two; he had no fever. Sordes, which I forgot to mention, cleared off; his tongue cleaned; his appetite became good and his bowels moved regularly without the aid of cathartics. The changes in his physical condition appeared as remarkable as those in his nervous and mental phenomena. He rapidly progressed to perfect recovery and is now, one year after, at regular labor and apparently well, physically and mentally.

An Anomalous Case of Appendicitis.

BY W. N. YATES, M.D., FAYETTEVILL, ARK.

On the morning of August 23, 1893, Arthur M., a school-boy, age 20, awoke with a pain in right flank. Ate some breakfast and rode on horse-back to school some five miles distant. Pain continued all day. While enroute home on the afternoon of the 23rd patient had a bowel movement. Pain continued through the 23rd compelling patient to remain in bed during Thursday the 24th. Thursday night patient took a bile bean; vomited several times during the night and toward morning pain became violent. Was called Friday morning at 6 o'clock to see patient. Found him with a temperature of 102° Fah., pulse 110, occasionally vomiting with pain and tenderness at McBurney's point. Gave him in two doses 3–8 grain morphia hypodermically, which made him quite comfortable for the remainder of the day. Hot fomentations were applied to right flank, morphia hypodermatically, pro re nata, absolute quiet enjoined and diet restricted to table spoonful of milk every two hours. At 6 P. M. found patient about as when I left him, no bowel movement, and no more vomiting. One hypodermic of morphine given during night.

August 26.—Patient about as yesterday; great tenderness in right flank but no tumor discernible, and an attempt to administer an enema through a 30 inch rectal tube brought on severe pain and compelled me to desist.

August 27th found patient about as yesterday. Requires about 1–2 grain morpia in 24 hours. Temperature ranges from 100.5° to 101.5° Fah. and pulse from 100 to 110. An enema administered through a rectal tube caused moderate bowel movement attended with sickening pain. Still no tumor of any kind discovered in right flank, but very pronounced tenderness localized about McBurney's point. Patient had a slight rigor on the night of the 27th with tendency to free perspiration during sleep.

About the 28th or 29, patient developed an intestinal catarrh which continued uninterruptedly for the next ten days, causing four or five fluid evacuations during each 24 hours. He remained about in statu quo until the 5th of September, when Dr. W. B. Welch saw him in consultation. A vague, ill-defined tumor about the size of a base-ball was discovered just to the left of median line in hypogastric region. No tumor nor dullness in right flank, but less typanitis than in the left.

Dr. Welch agreed in diagnosis of appendicitis and expressed a belief that pus existed somewhere in abdominal cavity. We set the 7th for an exploratory incision, barring the fact there should be no improvement in the interval. On the 7th, two weeks from the

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commencement of the attack,the temperature was 100.8° pulse 104, tongue furred, skin leaky, bowels loose.

The evidences of a tumor to left of median line were more vague and ill-defined than two days before. Right flank very intolerant of pressure but more tympanitic than two days previous.

Chloroform was administered and a thorough examination made for evidence of tumor in pericecal region. The search for a tumor of any kind under chloroform gave negative results. Bimanual palpation with a finger in the rectum failed likewise to find any tumor.

It was thought best not to incise the abdomen. The slight fever and soreness in right flank continued for some six or eight days longer when convalescence was established.

The interesting features of this case are:

The apparent formation of a tumor in hypogastric region, to left of median line; its unusual location considering the trouble to have been pericecal from the start; its mysterious disappearance after three or four days; the utter absence of any tumor in region of appendix; the complete recovery of the case without operation and without any history of an abscess discharging into bowels or elsewhere.

Antipyrin a Prompt Styptic.—Dr. F. C. Ford, of Nacodoches, Texas, Medical Director of Division of Texas Volunteer Guard, State Troops, says that antipyrin is a prompt styptic. He made the discovery recently, being called upon to remove a small vascular tumor in the mouth, an apparently insignificant matter, he had difficulty which he did not anticipate in stopping the blood. He touched it first with a point of nitrate of silver and it had no effect, he then applied antipyrin in powder, with the result as stated, of immediately arresting the flow.

The Doctor does not know what prompted him to do it, as he had never heard it recommended, nor was it suggested by the knowledge that antipyrin possesses any astringent properties, it is just one of those clinical facts, which one cannot explain.

Dr. Ford states that antipyrin can be relied upon in hemorrhage after extraction of a tooth, he has not tried it in any other cases. Should experience confirm the doctor's observation, and establish the fact that it was not a coincidence but that the drug is really a hemostatic, the discovery is of great practical value. All know the difficulty sometimes encountered in arresting apparently trifling hemorrhage. In epistaxis, for instance, if it can obviate plugging it will be a most valu able acquisition to the surgeon's resources. The solution of perchloride of iron, the tincture of iron, and other preparations of the kind are often objectionable, while being, next to ligature, his principal resource. They leave an ugly sediment or deposit upon the wound, which was to be removed, and are sometimes contra-indicated by their irritant nature. Antipyrin will make a much more cleanly dressing, to say the least.

EDITORIALS

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Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

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Pathological Anatomy of Chronic Gastritis.

In chronic gastritis we usually find lesions of the glandular elements and of the interstitial connective tissue. As a rule there is an infiltration of the connective tissue with leucocytis accompanied by parenchymatous processes. The fixed connective tissue cells are frequently the seat of very active proliferation. Also degenerated cells derived from the tubular cells, are found, also hemorrhagic infiltration and blood-pigment, free or inclosed in cells. In many cases these conditions are associated with amyloid degeneration of the blood-vessels and mucous membrane. The lesions of the glands coincide with symptoms observed intra vitam.

Dr. Hayem at a meeting of the Academy of Science, Paris, describes three different types of chronic gastritis. 1. The type in which the peptic glands are affected. 2. Where the mucous glands are affected and 3. An atypical gastritis. The first, gastritis parenchymatosa hyperpeptica, consists in an irritation of the peptic glands and leads to an hypertrophy and hyperplasia of these glands.

In the second, which is called gastritis parenchymatosa of the mucous glands, the peptic glands are destroyed and replaced by a proliferation of mucous

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gland. This form is also often accompanied by adenomatous and polypoid growths. The third form consists in an abundant proliferation of the epithelial cells of the pylorus accompanied by an atrophy of peptic glands.

Jean Martin Charcot.

The life of Charcot, the great neurologist, came to an end about the middle of August, 1893. Being born at Paris in 1825 he was sixty-eight years old at the time of his decease. Death came on suddenly, nothing having occurred by which his friends might have forecast such an event, his vigor of mind and interest in scientific subjects remaining the same to the last, yet his physical vigor had been obviously impaired. His death appeared to be due partly to overwork, for he habitually took too little rest. The Boston *Medical and Surgical Journal* gives the following description of his activity in the field of medicine:

In 1853, Charcot published his thesis for the doctorate, entitled, "A Study of the Affection described under the Names of Primary Asthenic Gout, Nodosities of the Joints, Chronic Articular Rheumatism." His researches in this disease comprehend a vast number of clinical and post-mortem observations made at the Salpetriere. One of the most important facts brought to light by these researches is that affections of the heart, such as pericarditis and endocarditis, belong to the generalized form of chronic articular rheumatism, as well as to acute rheumatism. Another result is to establish an identity between the affection known in surgery under the names of dry arthritis, arthritis deformans, etc., and nodular rheumatism. The separation of gout and chronic articular rheumatism is maintained. He showed that the presence of uric acid cannot be detected in the serum of the blood in chronic articular rheumatism, while in acute and chronic gout the existence of crystals of uric acid has always been recognized.

In a subsequent memoir, he considers the alterations of the kidney observed in the gouty, and gives new researches on the alterations of the joints. Gouty nephritis he believes to be by no means rare, to be attended by deposits of urates in various parts of the kidney, and frequently with the symptoms of renal colic. The lesions may be those of parenchymatous or interstitial nephritis, and the general symptomatology is that of Bright's disease.

Charcot published numerous memoirs on arterial and capillary embolisms at a time when this study was new, and German pathologists were just beginning to give attention to the subject. A *brochure* "On Sudden Death from Obstruction of the Pulmonary Artery by Blood-clots, etc., contains the first observation of death by pulmonary embolism published in France. His paper "On Ulcerative Endocarditis," published in 1862, based on a case of ulcerous affection of the tricuspid valve with typhoid state and the formation of multiple abscesses in both lungs, was the point of departure of an extensive medical literature.

Charcot's contribution to diseases of the lungs constitute two volumes of the new series of his writings. No one now describes the lesions of broncho pneumonia without referring to his work. In the study of pneumokoniosis and anthracosis his experiments on guinea-pigs, which were made to inhale in bags mineral or coal dust gave valuable aids to the comprehension of the pathogeny of a disease often observed in men as a result of occupations exposing them to the action of solid particles diffused in the air. His anatomo pathological researches on phthisis and chronic pneumonia have furnished valuable data and introduced system where it was before wanting.

His contributions to the subject of diseases of the liver and kidney are embodied in a volume published in 1882. He experimentally determined in guinea-pigs hypertrophic cirrhosis of the liver of biliary origin, and showed its identity with the disease which develops in man as the result of obstruction of the common bile duct. The different stages of the process he divides into angiocholitis, periangiocholitis, cirrhosis. His researches on the common or atrophic form of cirrhosis of the liver are also well known. He, more than any of his predecessors, has insisted on periphlebitis as the cause of this affection, and shown the extension of the inflammation from the veins to the connective tissue. His observations clearly differentiate this form from the other types of interstitial hepatites. Charcot's researches on grave icterus, on interstitial nephritis, which he was the first experimentally to produce in animals by ligature of one of the ureters, an experiment which showed that the alteration of the epithelium precedes the connective tissue proliferation, and on the various forms of Bright's disease, may also be noted.

He has also published valuable memoirs on fevers and on cholera, on skin diseases and on exophthalmic goitre, and his "Clinical Lectures on Diseases of Old Age," a work which embodies many of the researches and studies which he had previously made on gout and rheumatism. His contributions to the study of diseases of the nervous system—memoirs and treatises more than a hundred in number—are of great importance. In fact, it is in this department of medicine that he is best known.

Since January, 1882, Charcot held the chair of Clinical Instruction in Diseases of the Nervous System at the Salpetriere, and gave almost his undivided attention to nervous diseases.

Among his contributions we may mention his clinical and anatomo-pathological researches on encephalitis; his "New Researches on the Pathogeny of Cerebral Hemorrhage," which contain his description of miliary aneurisms, consequence of endarteritis, and cause of the cerebral hemorrhages which characterize especially the apoplexies of old age; his studies on secondary degenerations of the spinal cord, on localizations in diseases of the cerebrum, on localizations in the cerebral

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ganglionic masses of the hemispheres, lesions of the internal capsule in particular; his memoirs on cerebral hemianesthesia by organic lesion, and on secondary degenerations of the spinal cord in cortical lesions of the hemispheres, showing that lesions of the so-called motor zone even without participation of the internal capsule produces secondary spinal degenerations. We must pass by his valuable contributions to the study of localizations in diseases of the spinal cord. His discoveries in the subject of the scleroses alone—locomotor ataxia, multilocular sclerosis, fasiculated sclerosis of the lateral columns, also in the department of infantile paralysis, amyotrophic paralysis of the adult, labio-glosso-laryngeal paralysis, are of the greatest importance.

The modern study of hypnotism is intimately associated with the name of Charcot. His scientific methods of studying the subject, as opposed to the school at Nancy, are well known; in fact, the intimate association of his name with hypnotism has masked the importance of his work in other directions.

To enumerate his titles and honorary offices, or the titles of his contributions to medicine would require more space than is at our disposal. Besides being connected with the founding and management of these medical reviews, he published over two hundred and fifty memoirs, chiefly pathological, in all of which something valuable was added from his own investigations.

The Pathology of Diabetes Mellitus.

William Moser, M.D. in the New York *Medical Journal* says: The morbid anatomy of diabetes is very varied, and has been the source of much discussion. The disease presents no lesion or series peculiar to it. It is not a distinct disease I mean that it has no common cause; that it has no characteristic symptomatology or pathology; that its principal clinical manifestations—viz, persistent sugar in the urine, etc.—are dependent upon various morbid processes. It appears evident, from a review of the literature, that cause and effect have frequently been confounded; that at autopsies we are generally dealing with effects and not with causes appears to have been overlooked. Laboratory experiments have not enlightened us much in solving the pathogenesis of this disease. The chemical theories so far advanced have proved unsatisfactory. What are the lesions found at autopsies? Theoretically we expect to find changes in the fourth ventricle, but practically they are conspicuous by their absence. Various lesions are found in the brain, such as hemorrhages, tubercular meningitis, etc, but they have no causal relation to the malady in question. The lungs are frequently tuberculous, at times edematous. Sanders and Hamilton regard diabetic coma as dependent upon fat emboli in the pulmonary capillaries, with consequent slow carbonic-acid poisoning. Of course this is theory. That fat emboli do occur in some cases is beyond dispute. Frerichs ascribed the coma to acetonemia. This, too, is theory. The kidneys quite frequently show parenchymatous changes. The epithelial cells lining the looped tubes of Henle undergo glycogenic degeneration. I have had occasion to see a few of Ehrlich's specimens, who first made known this fact. It is an observation easy to confirm. It is recognized by the chemical reaction with iodine. These changes are regarded as secondary. The lesions in the liver are protean. In some instances the organ is found in a condition of passive hyperemia, in others fatty, in still others slightly cirrhotic. In short, there is nothing from which to draw etiological deductions, as many have done. The liver cells, too, give the reaction with iodine. The heart, spleen, and intestinal tract in cases seen by the writer showed nothing of pathological interest. Most writers refer to the fatty condition of the blood in this disease. While this condition of the blood is not constant, it may at times, as in a case which I saw, be so pronounced as to give the blood a milky appearance. It was so lipemic in this case that when placed in a glass and left standing a thick layer of fat floated on the surface. The presence of fat emboli in the lungs in these cases is apparent. Is this lipemic condition of the blood dependent on lesions or interference with the function of the pancreas? I am disposed to advance this theory for a few cases from the fact that the pancreas plays an important part in in the pathology of this disease. "Facts bearing upon the relation of pancreatic disease to diabetes have been accumulating since Cowley first discovered calculi in the pancreas of a diabetic, and Bright's pancreatic cancers in a similar case" (Tyson). In a case which I saw in the Berlin Pathological Institute an aneurysm of the arteria pancreatica was found at the autopsy. Atrophy of the pancreas is not infrequent; hypertrophy and fatty degeneration of the gland cells are sometimes seen. I have seen a few cases of the latter condition. A good specimen came under observation only recently at St. Catharine's Hospital. It must be admitted, however, that these cases (atrophy, hypertrophy and fatty degeneration) are not so clear as those mentioned above; that the factors which bring about these changes as well as the pathology of those cases in which the organ remains unchanged, are problems yet to be solved.

Greater Love Hath No Man Than This.

The Boston *Medical and Surgical Journal* writes: The Greeks made their gods simply themselves, with all their potentialities glorified into certitudes, as if to demonstrate what a Greek could be at his finest and best. The hero was merged into the god. The world has ever been quick to recognize valor, delights in brave exploits, exults in signal instances of moral ocurage, and makes haste to raise monuments to its heroes. Humanity loves to see itself at its best. Our rich inheritance from the ages in stories of daring on the battle-field, or heroism on the quarter-deck, has,

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perhaps, blinded our eyes to the silent, single-handed combats where there is no enthusiasm of numbers, no excitement of banners and drums, no shout of victory. And perhaps among the glorious company of heroes unchronicled and martyrs unsung, no profession holds so large a place as that of medicine.

The physician knows that a foe as deadly as a bullet and far more insidious lurks in the micro-organism. But undaunted, high-hearted, strong in his professional loyalty, he takes the risk which personal contact involves, with no thought but wresting his patient from the grasp of death. But the world too often fails to see that thus the doctor merges into the hero.

Every physician knows many instances in which his professional comrades have fallen by his side, struck down by infectious fevers or septic absorption acquired at the bedside of a patient. Notable instances have recently brought this peril afresh to our minds. A contemporary journal, in the last issue, records the death of a practising physician who caught the infection of yellow fever from a patient whom he was attending, and also the death of a promising young doctor to whom the infection of typhoid fever was communicated from a child-patient at the New York Hospital. Last week it was our melancholy duty to report the death of a brilliant young physician, of unusual qualities of mind and heart who caught diphtheria at the Boston City Hospital.

It will be observed that the personal risk is greatest to the hospital physician, not only on account of the large number of patients and variety of diseases which come under his care, but because the most malignant and extreme cases are naturally aggregated within hospital walls. It must be remembered that the physician and surgeon runs his greatest risk in that part of his calling where his skill and services are bestowed gratuitously.

Every call for medical aid in great epidemics has always brought a swift response of willing hearts and ready hands. Physicians have set aside all personal comfort,and gone to the unpleasant surroundings of loathsome disease, doing not only the work of nurse but even of household drudge, because all others had fled in terror from the dead and dying. Self-sacrifice is, after all, the real essence of heroism. The great scourges, formerly regarded as dispensations of Divine wrath, but now known to be the results of sanitary pollution, are yet full of imminent peril to the practitioner. The very scientific knowledge which helps him more intelligently to combat disease has also revealed the extreme subtlety of his invisible foe, and made clearer his hazardous calling. But increase of knowledge brings no shrinking to the physician. He puts fear under his feet, and walks serenely on in the path of his self-appointed duty. Carlyle says of the hero, "Now and always, the completeness of his victory over fear will determine how much of a man he is."

To the unthinking, the surgeon at the operating-table or the physician in the wards for infectious diseases is only a man pursuing his profession. But under the impassive exterior will be found "the stuff of which martyrs are made." He holds his life none too precious to be sacrificed, if need be, in relieving humanity's physical suffering, and surely "greater love hath no man than this, that a man lay down his life for his friend."

Rheumatism and Arterio-Sclerosis. — Dr. Manteuffel discusses the relation of so-called rheumatism in the lower extremities and vascular disease. The pains complained of are situated in varying parts of the feet and legs, the feet are cold, and numbness may be experienced. The skin looks pale, and is often desquamating in minute scales. Sometimes patches of characteristic erythematous edema may be seen with an increase in the symptoms above described. In these cases the pulses should be carefully examined. Differences may be present, and the arteries may be found degenerate. These manifestations are not to be confounded with articular affections, nor with solerosis of the veins. No varices or pigmentation are present. Localized edema is, of course, not to be mistaken for more general edema due to venous obstruction. It may be difficult to distinugish this affection from neuralgia, and in cases of arterio sclerosis the nerves may also be involved. For proof from morbid anatomy the author refers to cases of angio-sclerotic gangrene slowly developed and preceded by pains. He cites a case of gangrene in a girl, nineteen years of age, with diseased arteries, in which rheumatic pains had long preceded the gangrene. As to whether these rheumatic pains are a preliminary stage to gangrene cannot be denied with certainty in some cases. If the collateral circulation is insufficient gangrene occurs, but this late stage is often not seen. The author warns against local massage in these cases of arterio-sclerotic rheumatism. Some patients whose disease is written of as rheumatism, or even hysteria, thus really suffer from arterio-sclerosis.—*Deut. Med. Woch.; Med. Rec.*

Destruction of Microbes by Infusoria.—D. Harvey Atfield (*Brit. Med.Journ.*), a student in the Hygienic Institute of the University of Munich, recently carried out a number of experiments at the suggestion of Dr. Emmerich for the purpose of determining whether microbes of polluted river water are destroyed by infusoria. The experiment shows very cleary that the low forms of animal life which abound in river water are exceedingly active in the destruction of bacteria, and hence of service in the purification of water. In one instance, water which contained 3,000,000 bacteria per cubic centimeter (¼ dram) was found to contain at the end of ten days after infusoria was introduced only 13,000 bacteria, a proportionate decrease of 200 to one. In another case the decrease was 500 to one. In another case of water placed under the same conditions, without the infusoria, the number of bacteria increased from 700 per cubic centimeter to 121,500.—*Modern Med.*

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BOOK REVIEWS

A System of Genito-Urinary Diseases, Syphilology and Dermatology. — By Various Authors. Edited by PRINCE A. MORROW, A.M., M.D. In Three Volumes. Vol. II. Syphilology. Royal 8vo., pp. 917. With Illustrations. [New York: D. Appleton and Company. 1893. Price, Cloth, $6.50; Sheep, $7.50.

We have received the second volume of this handsome work and it has not disappointed us in our expectations. The subject of syphilis is considered in a manner which is full although not quite so complete as we would have liked to see it. However, it is, no doubt an impossibility to cover every possible point in a subject so vast as that embraced in the consideration of this disease.

Beginning with the history of syphilis we find the chancre next engaging attention, followed by an elegantly illustrated section on the syphilides, many of the plates being in colors. In this manner the various symptoms, appearances and changes induced by syphilis are considered in turn, concluding with a section on the demography and prophylaxis of the disease and a most elaborate consideration of its treatment. In this latter paper the therapeutic principles are given together with general and special methods applicable to the various conditions which present themselves. The involvements of special organs are fully considered in the work; so that, on the whole, it is a veritable cyclopedia of the subject under consideration, written by authors who have long since earned honors justly merited by their work in this special field.

Chancroid is taken up as somewhat allied to the subject of syphilis and forms the concluding part of the volume. It is discussed in an able and intelligent manner and in such a way as to prove of practical value to the reader. Whilst some space is devoted to the discussion of theoretical and moot points the more practical part is not lost sight of and much advice of a sound and helpful character is given to the reader.

The book is handsome from a purely mechanical point of view. The best of paper, clear type, and fine binding have not been spared and the illustrations, both excellent and numerous are almost all original, thus enhancing the value of a work which no physician can afford to do without. We would advise every practitioner to obtain a copy of the entire work, of which the present is the second volume.

Books and Pamphlets Received.

Stricture of the Utehrra. By G. Frank Lydston, M.D. Published by the W. T. Keener Company, Chicoga. Price, $3.00.

Essentials of Minor Surgery, Bandaging and Venereal Diseases.—Saunder's Question Compends, No. 12. By Edward Martin, A.M., M D. W. B. Saunders, Publishers, Philadelphia. Price, $1.00.

Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States. 1893.

Medical Consultation Book, A Pharmacological and Clinical Book of Reference. By G. P. Hachenberg, M.D., Austin, Texas.

A Chapter on Cholera for Lay Readers: History, Symptoms, Prevention, and Treatment of the Disease. By Walter Vought, Ph.B., M.D. Illustrated with Colored Plates and Wood Engraving. In one small 12mo. volume, 110 pages. Price, 75 cents net. F. A. Davis Co., Publishers, Philadelphia.

The Religion of Science. By Dr. Paul Carus. The Open Court Publishing Co., Chicago.

Our Need of Philosophy. By Dr. Paul Carus. The Open Court Publishing Co., Chicago, Ill.

Eighteenth Annual Report of the Secretary of the State Board of Health of the State of Michigan.

Electricity in Diseases of Women and Obstetrics. By Franklin H. Martin, M.D. The W. T. Keener Co. Publishers, Chicago.

Traitement Chirurgical des Affections Inflammatoires et Neoplasiques de L'Uterus et de Ses Annexes. By E. Doyen (Reims), Paris. 1893.

Typhoid Empyema.—Dr. Weintraud records a case of empyema beginning in the second week of an attack of typhoid fever of moderate severity. The patient was a young man, nineteen years of age, and he made a good recovery without operation, although, at the beginning of the fifth week, he was seized with symptoms which pointed to peritonitis. At the end of the fourth week an exploratory puncture was made, and a syringeful of yellow, viscid, slimy pus was drawn off. Microscopical examination and cultivation experiments showed that this pus contained only a small bacillus, which was recognized as the typhoid bacillus. Seventeen days later, and after the patient had recovered from the symptoms of peritonitis, a second exploratory puncture was made, and similar yellow pus drawn off; it was again found to contain the typhoid bacillus in pure culture. The virulence of the bacilli was tested on both occasions on mice, and the interesting fact appeared that those withdrawn by the earlier puncture were far more virulent than those obtained on the second occasion, two weeks and one half later. Weintraud points out that the case affords fresh proof of the fact that the typhoid bacillus is a pyogenic organism, and of the truth of the view expressed recently by Valentini and by Lorigo and Pensuti, that bacillus may be the direct cause of the production of empyema as a complication of typhoid fever.—*Ber. Klin. Woch.; Med. Rec.*

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ABSTRACTS

Some Therapeutic Problems Awaiting Solution.—The *Lancet* says: Complaints are frequently made regarding the backwardness and slow progress of therapeutics. In view of the complexity of the phenomena which are involved, the wide range of individual idiosyncrasy, and the impossibility in many cases of instituting anything in the nature of exact ex periment, it is possible that these complaints may be a little unreasonable. No one doubts that rapid and brilliant progress is continually being made in our knowledge of the pathology and the clinical history of disease, and when the conditions of the question are fairly considered it will not seem surprising that therapeutic progress should follow rather than procede advances in pathology and clinical medicine. However this may be it is desirable that we should from time to time review our position regarding some of the as yet unsolved or imperfectly solved problems of medicine. Time leaves little unchanged, and even in the absence of any notable experiments or discoveries it will always be found that we are from year to year insensibly altering our attitude toward the great therapeutic controversies of our age. Experience always teaches something, even if it be only caution and skepticism, and every day facts arise which tend either to confirm or to undermine provisional theories and working hypotheses. Truth prevails very slowly and error is as slowly expelled; but the intellectual atmosphere is ever changing. Doctrines that seemed to be probable a decade ago appear to be hardly worth contending against to day. Theories that gave a passing satisfaction to the thoughtful physician of the last generation seem to be strangely outworn today, although little may have been accomplished in the way of tangible disproof.

We may find illustrations of our remarks in such dis eases as syphilis, phthisis, pneumonia, diphtheria, and typhoid fever. It is not so long since the revolt against the abuse of mercury was in full swing and had gone so far that certain accomplished observers maintained that some of the worst features generally attributed to the disease were really due to the remedy. Now we feel that this question has passed out of the sphere of serious discussion. With a practical unamimity we ac knowledge the value of mercury, and the only problems that await solution in this connection are the proper form of the drug to employ in a given case, the correct dosage, and the mode of administration. Phthisis affords a more difficult case. For the present, treatment by inoculation stands condemned, and it is not likely to be generally revived unless more extensive and authen tic evidence of its utility than that which first gave it vogue is forthcoming. We have not, however, yet finally determined whether the antiseptic treatment of phthisis is as sound in practice as it seems to be plausible in theory. The use of antiseptic inhalations, though much less general than it was a few years ago, still holds its ground to some extent. We would commend to the profession the determination of the following question, which lies at the root of the problem: Supposing it be granted that bacilli are the cause of phthisis and that their dostruction is the legitimate object of the efforts of the physician, is there any evidence to show that an antiseptic solution or vapor can reach the seat of the disease in sufficient strength to effect this object? We fear that, for the present at least, there is no such evidence; and without discouraging further experiment we very decidedly deprecate the use of inhalers and inhalations which are theoretically indefensible and manifestly ineffective. Then, again, with reference to the same disease, much advantage would arise from the diffusion of more definite views regarding the different effects of the various sanatoria upon its progress and palliation or cure. The high altitudes, the ocean voyage, and the desert air are all known to possess considerable efficacy, but although the literature of the subject is rapidly increasing, it can not be said that the profession generally has assimilated the opinions of experts on these subjects.

Pneumonia is still more or less of an opprobrium to the therapeutist. Vigorous stimulation still commands the approval of the great majority of adherents, but thoughtful physicians can hardly repress a doubt as to whether it is universally applicable and whether a place might not still be left for venesection and antimony. Sweeping generalizations in medicine are hardly ever true, and the time may come when greater therapeutic distinctions will be drawn between the different types of case, to the great advantage of the patients. Then we need further to make up our minds whether cardiac failure is really the chief source of danger in pneumonia, and, if it be so, whether we have made sufficient use of our great cardiac tonic, digitalis.

It is not so long since one of the great battle grounds of practical medicine was the identity or non identity of laryngeal diphtheria and membranous croup. This question has never been authoritatively settled, and although the doctrine of identity has tended to prevail, somehow or other the question has lost its interest, and we have come to see that its practical importance had been overrated. What is certain is the clinical fact that a membranous affection of the pharynx is only moderately perilous, while a membranous affection of the larynx is excessively dangerous, and in young children is very frequently fatal. In view of these clinical facts, the question of the precise pathological character of the membrane in the different cases becomes of minor interest. More important are the questions whether the removal or destruction of the membrane is ever advisable and when tracheotomy should be performed. The former question is now usually answered in the negative; and the latter raises one of the most difficult points in therapeutics, and one which is further rendered perplexing by the fact that foreign experience seems to be at variance with our own.

As regards the last disease on our list—viz., typhoid

fever—we greatly need more authoritative teaching and more defined views on two questions:

1. Is intestinal antisepsis the legitimate aim of treatment, and, if so, which of the numerous antiseptics is the most suitable one?

2. Is antipyresis generally advisable, and, if so, are we to trust to medicinal antipyretics or to the cold bath?

To discuss these questions adequately would take us beyond our present limits, but we commend them to the thoughtful attention of our readers. We may merely suggest that intestinal antisepsis is still upon its trial, and that as regards antipyresis British practitioners have perhaps unduly neglected the external application of cold.

The Treatment of Diabetes.—Dr. George Harley (*Br. Med. Journ.*) divides diabetes into the following varieties:

1. Hepatic diabetes—including the gouty variety.

2. Cerebral diabetes—including all cases of saccharine urine arising from nerve derangements.

3. Pancreatic diabetes—the most deadly form of the disease.

4. Hereditary diabetes—a form by no means uncommon, and one where both brothers and sisters may labor under the disease without either their maternal or paternal parent having been affected by diabetes, though more distant members of the family may have suffered from it.

5. Food diabetes—including all forms of saccharine urine arising from the injestion of unwholesome substances.

He regards the hepatic variety as an example of diabetes arising from excessive sugar formation; and pancreatic diabetes as that arising from diminished consumption—malassimilation. Since sugar is only the visible sign of the invisible faulty chemistry, we no longer attach the same importance to the diminution of the sugar which invariably takes place when a patient is subjected to a restricted diet. That diminution in the amount of sugar eliminated is not, *per se*, an infallible sign of improvement is demonstrated by the fact that even in severe cases of diabetes the sugar occasionally totally disappears from the urine when the patient is attacked with an acute disease, such as typhoid fever or inflammation.

The line of treatment to be pursued is in every case to begin by putting the organ, supposed to be at fault, to rights; be it liver, nervous system, or pancreas, at the same time—as the liver is the sugar manufactory of the animal body—always take care that the biliary functions are in good working order.

In the next place endeavor to raise the general health of the patient to its highest possible standard by giving him plenty of fresh air and healthy muscular exercise within the margin of fatigue, and keeping away from him all mental and bodily lowering influences.

In cases of diabetes the result of excessive sugar formation, as all hepatic cases are, a restricted diet is essential; but to wholly stop the saccharine supply is not what is wanted. Were we to do this we would arrest every function of animal life, for a certain proportion of sugar is absolutely essential to their proper performance.

A healthy man of about 182 pounds weight uses up daily no less than 2 pounds of sugar. In cases of excessive formation there is often manufactured in 24 hours 2 or 3 pounds over the necessary amount, and this is eliminated with the urine as so much unnecessary material; consequently it is this portion that the non-starchy diet is intended to avoid. It is with this object that a proteid diet is given in all cases of diabetes due to excessive sugar formation, for the liver can form sufficient saccharine matter from preteids to meet the wants of the system without there being much risk of its manufacturing a superabundance. But such a dietary needs some modifications in diabetes due to diminished saccharine consumption—malassimilation. It is necessary in such cases to supply such easily assimilable foods as will retard emaciation, while they at the same time keep up the vital powers of the patient; hence not only give fresh milk, but cream, butter, cod-liver oil, and when greasy stools are met with, as in the pancreatic variety of the disease, give along with the oil, either liquor potassæ or carbonate of soda dissolved in glycerine in order to emulsify the fat.

When the loss of flesh and strength is great, as these changes are due, not to the presence of sugar in the circulation, but to the want of its assimilation, do not hesitate to give freely the most easily assimilable saccharine substances; namely, honey and pure cane sugar. Kulz even recommends levulose, the exact analogue of diabetic sugar.

For similar reasons, when patients suffering from excessive sugar formation begin to lose flesh and strength, and show signs of mental weakness, at once relax the severity of the restricted diet, and allow them toasted brown bread, along with fats and plenty of green vegetables and fruits.

Purgative alkaline waters diminish the sugar in the urine simply by removing food stuffs from the intestines before the saccharine matter can be absorbed; non-purgative alkaline waters assist in the emulsifying of fats, and hence yield good results in pancreatic cases.

Alcohol in every form is injurious and should be permitted only when weakness and loss of appetite show themselves in cases of diabetes from excessive formation of sugar, or when increased debility is a marked symptom in those due to diminished saccharine assimilation.

To quench the thirst, tea, coffee, lemon squash, soda, koumiss, and similar beverages may be used, but diluted phosphoric acid appears to serve the purpose better than any thing else.

The drugs that act best in cases of excessive sugar formation all belong to the anodyne and narcotic class—opium, morphine, codeine, etc.—and act by virtue of the power they possess of reducing hepatic nerve en-

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ergy. In cases of diabetes the result of nerve depression, as well as those arising from pancreatic disease, strychnine is of great service when given in the form of ext. nuc. vom., gr. ¼, three times daily in a croton-chloral pill combination.

Gonorrhea and the Puerperium.—Kronig (*Centralbl. f. Gynak.*), has studied the development of gonococci in nine women after labor. The germs are easily found in the lochia. It is certain that in women with vaginal gonorrhea the disease may extend into the uterus during the puerperium. Gonorrheal infection of the uterine cavity may also set up fever even when there is no trace of mixed infection, no other germs being present. Gonorrheal infection in the pureperium is not of direct danger to life, but frequently leads to complications late in the puerperium, the disease progressing from the endometrium to the tubes. Two cases of this kind were recorded. The first, after the usual careful routine treatment, left the hospital on the fourteenth day. Two weeks later she returned. A perimetric exudation was detected to the left of the cervix. The second case was graver. On the fourteenth day the temperature rose to over 103°, the right elbow became painful, and effusion into the extensor tendons of the right hand occurred. During the third week right parametritis set in, the temperature rising to 104°. Then the pain and parametric swelling subsided, The fluid from the tendosynovitis was sero purulent but free from germs. —*Med. and Surg. Rep.*

A Case of Cerebral Syphilis.—Brousse (*Montpellier Medical; Am. Journ. of Med. Sciences*) has reported the case of a woman, twenty two years old, who was found at the foot of her bed, semi-comatose and unable to move or to explain her condition. Examination disclosed the existence of a complete left hemiplegia, involving the face as well as the extremities, but without anesthesia; there seemed to be a slight degree of hyperesthesia upon the left side. The muscles of the upper part of the face and the ocular muscles were not involved; the pupils were dilated. No lesion of the heart or great vessels was to be detected. The woman presented numerous syphilitic stigmata. There were large patches of discoloration upon the anterior aspect of the chest and eruptions of diverse character and at different stages upon the thighs and legs, as well as the remains of healed gummata, and on the left thigh a gumma in process of ulceration. Mercurial inunctions were at once instituted and the administration of potassium iodide begun, while mercurial plaster was applied to the ulcerating gumma and a gargle of potassium chlorate was prescribed. In the course of a few days intense stomatitis with copious salivation developed, and the mercury had to be withdrawn, the iodide, however, being continued. Appropriate treatment was directed to the condition of the mouth. The woman's condition meantime improved. The apoplectic condition began to recede, and she was soon able to give an account of herself. It was learned that her mother had died in attack of apoplexy at the age of forty-five years. She herself had acquired dissolute habits at the age of sixteen, and at the age of seventeen contracted a chancre of the left labium minus. Subsequently there developed a malignant syphilis of rapid evolution. For several years there had been intermittent headache, which later became dull and persistent and was referred particularly to the right frontal region. There was neither vertigo, convulsions, nor impairment of vision. For a year menstruation had been entirely suppressed. After a night of excessive venery the woman was overcome and fell at the foot of her bed, although consciousness was not entirely lost. In this condition she was found, defiled by her urine and her stools, which she had involuntarily passed beneath her. The woman believed that the attack coincided with the time for the occurrence of menstruation. In the further progress of the case subcutaneous injections of mercury benzoate was instituted, the iodide being at the same time continued. With this treatment there was progressive improvement as regards motility, but the general condition remained poor. At the end of twelve weeks, without apparent cause, a violent epileptiform attack occurred, and was soon followed by others in rapid succession. The attacks were characterized by clonic convulsions in the extremities of the right side, with tonic spasm of those of the left, and conjugate deviation of the head and eyes to the left. The action of the heart was at the time extremely rapid, and there was profound depression, but there was no elevation of temperature. Some relief was afforded by the subcutaneous injection of ether and the administration of bromide. These attacks were followed by great weakness and an increase of the left-side paresis. From this time the condition of the woman grew progressively worse. Right-sided pneumonia developed, which was thought to be tuberculous, although repeated examination of the sputum failed to disclose the presence of tubercle bacilli. Troublesome diarrhea additionally set in; the state of weakness grew more profound, and death took place amid the symptoms of asphyxia. At the post-mortem examination the calvarium and the cerebral membranes presented no abnormality other than a notable thinning at the anterior superior angle of the parietal bone of either side, and a depression of the dura mater in the right frontal region. There was a large subdural accumulation of sero sanguinolent fluid and injection of the pial vessels, particularly in the Rolandic region. There was also generalized cerebral edema. To the touch the right Sylvian artery conveyed the sensation of a hard cord; its walls were greatly thickened. At the root of the third right frontal convolution was a circumscribed area of yellow softening, about as large as a nut, extending deeply and involving somewhat also the adjacent ascending frontal convolution. There was another, but smaller and superficial area of softening at the posterior extremity of the right Sylvian artery involving the angular gyrus. On mak-

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ing sections of the brain an extensive area of softening was found involving the anterior two-thirds of the caudate and lenticular nuclei, as well as the anterior limb of the internal capsule and the motor zone of the centrum ovale. The posterior third of the posterior limb of the internal capsule escaped. Pons, medulla, and cord presented tracts of descending degeneration. The right lung was adherent to the costal pleura. It presented the appearance of a fibro-caseous mass and was filled with yellowish miliary granulations, particularly confluent at the apex. The bronchi were filled with pus. The left lung was congested, particularly at its apex, but presented no granulations. During life it was thought the symptoms were dependent upon the presence of a gumma in the brain, but the autopsy demonstrated that the pathologic process was essentially a syphilitic endarteritis leading to anemic softening.

Operations in the Vertebral Canal.—Urban defines the indications for operations in the vertebral canal as follows: 1. Vertebral fractures with pressure upon the spinal cord. The operation is not to be undertaken immediately after the injury, but should be postponed until the beginning of consolidaiton, as it would be extremely difficult in the beginning to firmly set together the broken parts. The proper time varying with circumstances, would be from the fifth to the eight day, if by that time symptoms are not on the mend; if after the twelfth week there should be no improvement the operation should undoubtedly be performed. 2. New formations in the vertebral canal. 3. Spondylitis tuberculosa, after the process has remained stationary during at least several months, and no abscesses are suspected. 4. As an exploration measure in all cases in which symptoms of localized pressure on the spinal cord are shown, after which according to what is disclosed, the operation may be completed.—*Verhandlungen der Deutschen Gesellshaft f. Chirurgie; Med. and Surg. Rep.*

Generalized Tuberculosis Especially Affecting the Serous Membranes.—Sergent (*Bull. de la Soo. Anat. de Paris; Am. Jour. Med. Sciences*) has reported the case of a girl, eleven years old, whose father had died at the age of thirty-three years with bilateral pneumonia, and whose maternal grandfather had been tuberculous. When eighteen months old the child had had convulsions for a week. From the age of seven to nine she had had slight epistaxis almost every morning. At the age of eight she had had whooping-cough lasting for three months,and at nine years she had had measles. For two months it had been observed that the child was rather depressed and always tired, complaining a good deal of pain in the thighs. Appetite was lost, and almost everything that was swallowed was rejected. There was almost constant headache. Emaciation and debility were quite pronounced. There was pain in the abdomen, but no tumor could be detected upon palpation, though there was evidence of the presence of fluid in the peritoneal cavity. The liver extended a finger's breadth below the margin of the ribs, but was not painful upon manipulation. The area of splenic percussion dullness was not increased. There was little cough, without expectoration; there had never been hemoptysis. There was no dyspnea and no thoracic pain. The pulmonary percussion resonance was slightly impaired at the summit of the chest; the breathing was roughened, and some fine rales were to be heard. The heart-sounds were feeble and distant. There was no palpitation and no precordial anxiety. The pulse was rapid and small, and intermitted occasionally. The urine presented no abnormality. The bowels were constipated. The temperature, a little elevated, rose higher and became irregular and oscillating. Dyspnea and pain in chest later set in. An area of dullness became apparent in the outer part of the right infra-spinous region, and here the breathing was bronchial, and crepitant rales were to be heard. Later, pleural friction sounds were to be heard upon the right, and crepitant rales in other parts of the right lung and also in the left lung. The abdomen became progressively more and more distended and painful, while the dullness in the depended portions became more pronounced. Finally, the patient was seized with convulsions, loss of consciousness, and anesthesia. The attack lasted about two minutes, and was followed by copious perspiration. An hour later a second attack occurred, and in the course of the day four others. Death took place at night during the ninth paroxysm.

At the necropsy two quarts of sero-purulent, flocculent fluid were found in the abdominal cavity, the walls of which, and loops of intestine as well, were in places lined by false membrane. The liver was large, fatty, and friable. The spleen was of usual size, deep-red in color and rather deficient in consistency. Upon its surface were numerous disseminated yellowish granules. The kidneys presented little change beyond congestion. The jejunum and ileum contained several small superficial ulcers, marked at the periphery by little granulations visible upon the peritoneal surface. At the junction of ileum and cecum there was a confluent mass of granulations also visible upon the peritoneal surface. The visceral peritoneum presented many granulations, and the mesenteric glands were enlarged. The right pleural cavity contained a small quantity of sero-purulent fluid. The right lung was extensively adherent to the parietal pleura, especially posteriorly and at the lower part of the upper lobe. At this point there was a thick layer of pseudo-membranes, in the midst of which was a large number of granulations. The lung beneath this, in an area perhaps equal to that of a small orange, exhibited a conditiun of caseous pneumonia. Adjacent to this, both superficially and profoundly, were numerous granulations, diminishing in number as this focus was receded from. Elsewhere upon the surface of the lung were scattered granulations, most marked, however, at the interlobular fissures. The left lung presented a number of scattered granulations. The trach-

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eal and bronchial glands were enlarged and caseous. At the hilus the right mediastinal pleura and the peri cardium were adherent. The pericardium was dis tended to the size of a fetal head, and was in part covered by the left lung. An incision evacuated nearly two pints of hemorrhagic fluid. The membrane was lined by fibrinous exudation, beneath which many tu berculous granulations were visible. The heart was dilated, the myocardium flabby; valves and orifices were normal. The convexity of the brain was congested and presented slight exudation in the course of the pial vessels. In the anterior perforated spaces, and accompanying the Sylvian arteries, a number of granulations were visible. Tubercle bacilli were found in the pulmonary and pericardial lesions.

Removal of a Large Vesical Calculus by Celiotomy.—Milton (*Lancet; Medical News*) has reported the case of an Egyptian fellah, aged sixty, who gave a history of having suffered with the symptoms of stone in the bladder for two years, and with total incontinence of urine for two years, although it was believed that the man had no adequate notion of the length of time. Upon examination a mass could be felt extending from the prostate to the umbilicus, and a loud click was evident on sounding. The urine was ammoniacal and contained mucus blood, pus, albumin, tube casts, and bilharzia eggs. The patient was bed ridden and greatly exhausted. As the stone was evidently so large that it did not seem possible that it could be removed without making so large an opening in the bladder as to involve the peritoneum, it was decided that it would be safer to open the peritoneum at the beginning of the operation, and to take the necessary precautions to avoid its infection. The patient was chloroformed, and, after the usual precautions to insure asepsis had been taken, an incision was made in the abdominal wall from the pubes to the umbilicus. A small extra peritoneal incision was then made into the bladder, in order to make sure that the mass was not constituted of several calculi, and also to permit of the cleansing of the cavity of the bladder with a boric acid solution. As it was found impossible to detach the peritoneum from the upper surface of the bladder with out opening the serous cavity, the peritoneum was incised from the bladder to the umbilicus. The lower extremity of this incision was little by little prolonged backward for about two inches, on the summit of the bladder, until its posterior limit was reached, the peritoneum being dissected from the bladder and dragged slightly forward before being incised, as to obviate any danger of the serous surface being soiled by the con tents of the bladdder. As soon as the peritoneum had been opened sufficiently, its general cavity was shut off with plugs of sterilized gauze. The bladder was now incised to the full extent of its anterior and superior surfaces, and the stone was exposed. It could not be grasped with forceps, and pressure from below, with two fingers in the rectum, failed until two lateral incisions of the bladder-wall had afforded increased space, and allowed of easy delivery. The bladder was now thoroughly cleansed with a boric acid solution, the peritoneum being closed with catgut sutures, the bladder with silkworm gut sutures, and the abdominal incision with silver-wire sutures. A sufficient opening was left in the abdominal and vesical walls for a siphon drain, which reached to the post-prostatic pouch. The patient had a severe struggle for existence for the first eight days after the operation, his kidneys failing to act, the amount of urine sinking to ten ounces on the fifth day, and the temperature falling below normal. On the sixth day, as the siphon was clogged and would not work, the bladder was punctured through the perineum. On the thirty-fifth day, the patient having shown indications of the presence of another calculus, the perineal wound, which had closed, was reopened, and a uric-acid stone, weighing twenty-three grains, was removed. The patient's condition now improved, but as no power of expulsion was regained by the bladder, the perineal and supra-pubic fistulæ had from time to time to be reopened. The patient ate well, slept well, and went out of doors, but he never gained in weight. Two months after the first operation he began to sink, and died ten days later. For the last five days of life, in addition to his ordinary food, he was given one or two raw kidneys. Upon post mortem examination, the bladder was found to be thickened and contracted, but otherwise healthy. The peritoneum showed no trace of surgical interference. Both kidneys were in a condition of advanced chronic apostomatous inflammation, and contained bilharzia worms. The stone removed from the bladder weighed thirty-four and a half ounces. Its largest diameters were four inches and six inches. The outer layers were constituted of magnesian phosphates, but no examinations of the inner layers was made, as the stone was not cut. It is believed to be the largest stone ever successfully removed from the human bladder.

Hemiplegia Following Diphtheria.—Edgren (*Deut. Med. Woch.; Med. News*) has reported the case of a boy, with a good family history, who had had measles and whooping-cough, and at the age of nine years an attack of diphtheria. This last illness was attended with severe vomiting. At the close of the third week, during convalescence, the little patient suddenly fell to the floor from the chair upon which he was sitting. It was not observed whether consciousness was lost or not, and whether paralysis was present or not, but on the following day it was noticed that the right side of the body was paralyzed, and that the power of speech was wanting. The patient himself was able to recall that for some time there were twitchings in the tongue and in the upper and lower extremities upon the right side. The right angle of the mouth was lower than the left; the right cheek and right half of the chin were motionless; but both eyes could be closed. The right arm and the right leg hung relaxed, though capa-

ble of feeble movement. The patient could not speak and could make only unintelligible nasal sounds. On attempts at swallowing, fluids would return through the nostrils. Sensibility was lost upon the right side, and this side was also colder than the left. Urine and feces were passed incontinently. In the course of five or six weeks the patient was able to walk about the house by supporting himself. This improvement continued, and in several weeks more he was able to speak intelligibly, though for several months in a nasal tone. The only further complication was a transitory paresis of accommodation. Examination a year later failed to reveal a cardiac lesion. Slight paresis of the lower portion of the face persisted. The tongue was protruded a little to the right. The left arm was somewhat stronger than the right. In walking there was a little stiffness, dragging and swinging of the right lower extremity, the movements apparently not being under perfect control. The right hand became cyanotic when held dependent for a time. The ulnar reflexes were alike on both sides. The patellar reflexes were energetic and that upon the right more pronounced than that upon the left. The Achillis tendon jerk was also more active upon the right than upon the left; and upon the right there was ankle-clonus. The sense of localization was less good upon the back of the fingers of the right hand than upon the back of those of the left hand. Electric sensibility was less perfect in the extremities upon the right than upon the left side. The electric irritability of the muscles upon the right side was diminished, but there were no qualitative changes. Considerable improvement followed treatment with electricity. A diagnosis of hemorrhage into the internal capsule of the left cerebral hemisphere was made.

Rest As a Therapeutic Agent in Chronic Pulmonary Tuberculosis. — Karl Von Ruck, Asheville, N. C. (*Dietetic and Hygienic Gazette*) calls attention to the tendency to over estimate its value, and to recommend rest as a general means for a cure, and objects to its application with that view. Rest in bed for prolonged periods is not conducive to the best nutrition of the healthy subject, and under its use he suffers in loss of strength, the digestion is likely to become deranged and the muscles become soft and diminish in size; the same is true of the patient who has a tubercular deposit in his lung, without any existing complication, that is, in the so called early stage of the disease. He, as a rule, requires restriction in amount of physical and mental labor, because of previous inherited or acquired nutritive disturbances, which were the cause that made the tubercular infection possible, he is less able to labor and exercises without over exertion, but absolute rest in bed is not only not indicated, but on the contrary, out-of-door life, and a proper amount of exercise, limited to come short of producing sensible fatigue, is highly essential for a cure.

It is only in certain complications which may, or may not, arise in the course of chronic pulmonary tuberculosis that rest in bed is essential until their removal is accomplished; chief among these are pleurisy, hemorrhage and septic fever. In pleurisy and hemorrhage patients takes voluntarily to bed, not so with septic fever, especially when it is mild or intermittent, and indeed, many practitioners allow their patient to be about, and even advise exercise regardless of its presence.

Septic fever only occurs when certain other pathogenic germs have gained entrance to the tubercular deposit, and with such additional infection tubercular deposits do not undergo suppurative and destructive changes; on the contrary, they remain quiescent for indefinite periods, and tend to fibroid changes, encapsuling and atrophy of the tubercular tissue. Rest in bed cannot prevent the additional infection, neither can it hasten the fibroid process, since it is only with more or less difficulty that we can keep the patient at his best of nutrition under long rest in bed.

When septic fever has once been established, its importance is such that for the time it controls the entire situation, and no direct treatment by supposed specifics or remedies for the tuberculosis can be of avail; such efforts more frequently result injuriously, and direct the attention from the main issue. Rest in bed is now necessary, not because the patient has tuberculosis, but because the complicating septic fever demages the heart, inducing degenerative processes in its muscular fibres, and causes other deleterious effects upon the organism, all tending to wasting and exhaustion of the patient.

Even before the septic fever occurs, the heart is called upon for extra labor on account of the obstruction to the free pulmonary circulation caused by the tubercular infiltration of the lung, and on that acount exercise and labor need to be restricted from beginning in every case. The presence of fever calls upon the heart for extra labor still, and at the same time tends to diminish its contractile power, thus leading to passive congestion, hemorrhage and defective nutrition of the involved lung tissue, favoring the advance of the destructive process. Under such conditions the indications are to preserve a good heart action and to lighten its labor.

For the former purpose the author depends upon proper feeding and stimulants and for the latter rest in the recumbent position, the same as he would in any prolonged febrile state.

More severe septic fever does, however, not yield to these agents alone; and while rest is of the greatest importance, and shows its effect by amelioration of the patient's condition, the complication is not controlled, and the patient goes down, only at a slower pace. Here the author finds hydropathic treatment, and the subcutaneous use of nitrate of strychnia very useful in helping the patient through the critical periods. In connection with the enforced rest, he also makes use of massage or electricity, or both, and exposes the patie

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to out of-door air and sunlight; but when improvement is well under way, and the temperature has remained normal or nearly so for several weeks, he allows the patient to go out, and finds the out-of-door life, with limited exercise, as conducive to improvement in such advanced cases as they are in the early stages of the disease.

Dieulafoy on the Early Diagnosis of Bright's Disease.—For years past M. Dieulafoy has, both at the bedside and in his much-read work on Medicine, sought to emphasize the importance of divers symptoms which, though often apparently trivial are none the less significant of the existence of that very common malady Bright's disease. To these symptoms he has given the name of *petite uremie*, Brightism. He regards albuminuria as an unreliable symptom of Bright's disease (*The Lancet*). In sixty cases under treatment in his wards during recent years albuminuria was absent in one fourth. That nephritis really existed was proved in several instances post-mortem. In another series of cases albumin disappeared in spite of the continued evolution of the disease. Some patients are albuminuric without being Brightic, to adopt the French expression. Among the symptoms of Bright ism M. Dieulafoy mentions auditory troubles. These consist in whistling or more sonorous noises in one or both ears, the causes being multiple (edema, paralysis the acoustic nerve, pressure variations). The frequency of these noises may be judged of when it is stated that they were present in thirty-four out of sixty cases. Meniere's vertigo was frequently complained of (thirteen times in sixty). Asphyxia of the extremities, first described by Maurice Raynaud, is one of the commonest symptoms of Bright's disease. This begins as formication of the hands or fingers, and then the tips of the latter become bloodless, pale, and numb. This dead-finger symptom is found in all forms and in all the stages of Bright's disease. Itching, without possessing the same importance as the above, is sometimes very severe. Frequency of micturition is well known as a symptom of the disease. To this symptom M. Dieulafoy has given the name of pollakiuria to distinguish it from polyuria, many Brightics, in fact, micturating ten or twelve times a day without voiding a quantity above the normal. Cryesthesia, or sensitiveness to cold, is a minor symptom of nephritis. It is generally confined to the lower extremities. Cramps, especially nocturnal, in the calves of the legs are sometimes severe enough to wake the patient. Epistaxis, chiefly occurring in the morning, is often significant. Electriform shocks must also be counted in this category. At the moment of falling asleep or during sleep the patient is aroused by a single violent shock recalling the effects of an electric discharge. The temporal sign is frequent. Here the temporal artery is distended, dilated, and tortuous without being atheromatous. This is of course due to gh arterial tension. The foregoing symptoms of rightism, if associated in any one individual, are, according to M. Dieulafoy, sufficient to warrant the diagnosis of Bright's disease. He is convinced that many people apparently healthy are in reality Brightics, and this conviction would be shared by most practitioners did they inquire into the presence of these symptoms of Brightism. A confirmation of this diagnosis will frequently be found in the good effects of an exclusive milk diet, which causes the disappearance of these seemingly insignificant troubles. M. Dieulafoy has also applied another test—viz., the degree of toxicity of the urine passed by patients affected with Brightism. He finds that this secretion has in such cases lost a portion of its toxic properties.

Erysipelas of the Bladder.—Dr. Frisch reports the following case, in a patient fifty-two years old, whom he had had under observation and treatment in successive attacks of abscess in the prostate for some time. The patient entered the hospital with one of his usual attacks, but after its symptoms had disappeared there remained a fever that could only be accounted for by the presence of pus, albumin, and a few streptococci in the urine, while the prostate and bladder were sensitive to pressure. Upon the third day, after a severe chill, there appeared upon the left leg a spot the size of an almond, which presented the characteristics of an erysipelatous eruption, and caused the author to conclude that he had to deal with an erysipelas of the vesical mucous membrane, originating in or caused by the abscess of the prostate. This diagnosis was confirmed by the bacteriological investigation of the urine, the streptococci of erysipelas being recognized both in the plate cultures and by their characteristic growth in the "stick" cultures, and by their reproducing the disease after inoculation. These bacteriological evidences in the urine increased and then disappeared with the course and termination of the disease in the bladder. The cystoscope showed the mucous membrane deeply red in color, and raised in great folds over its entire surface during the height of the disease. The skin eruption was metastatic—probably through the blood-vessels; this was shown by its origin on the lower leg, far from the original seat of the disease, and by its second appearance on the chest, after having passed over the entire posterior surface of the body and apparently subsided. The patient made a good recovery.—*American Journal of the Medical Sciences.*

Gastro-Intestinal Exhaustion.—Among the many cases of gastro intestinal disturbances which occur in warm weather, a certain number may be fairly considered as a class by themselves, due not to poisoning or errors in diet, but best described as cases of gastro-intestinal prostration. The clinical picture is fairly definite. The onset is slow, as a rule; indeed the patient is often unable to give a more accurate date of the beginning of his trouble than "the first of warm weather." There is no history of errors in diet or exposure to cold —as there is no sudden onset of symptoms. A general

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mild anorexia for a day or two, slight irregularity in the action of the bowels, and a little distress after taking of food, have hardly attracted any attention; but the continuance and gradual increase of a mild diarrheal tendency are the first symptom heeded. The diarrhea is unaccompanied by pain, though often attended with flatus. Diet, when at all rational, has but slight connection with the dirrrhea. The whole picture of the case when carefully noted is quite distinct from that of acute or sub-acute gastritis, due to irritant ingesta. There is no fever or vomitiug, though there may be slight nausea. The chief complaints of the patient are of the annoyance of the diarrhea, and of a sense of weakness. The ordinary treatment of gastro intestinal catarrh is usually given with a gradual improvement of the patient toward fall. The noticeably good effect of a few cool days on the patient points to the rational explanation of the condition, the greater or less exhaustion of the nervous centers controlling the alimentary tract. The effect of heat upon the human system varies so much in different persons that it is not easy to trace the exact course of its workings. Some people are always "better" in summer; they like hot days, and with such people cases of gastro-intestinal exhaustion are not found. It is the person whose nervous system is below par, or easily exhausted by heat, who is troubled by this atony of all ailmentary processes. Indeed, the digestion suffers only as a result of marked nervous exhaustion, affecting chiefly the great ganglionic centers of the sympathetic system. With this theory of the cause of the patient's trouble the indications of treat ment are seen to be quite different from those of ente ritis. The diet, should, of course, be light and simple, but it should be abundant. The patient should be kept quiet, fed often and regularly, with varied but easily digested food. Removal from a heated, noisy city to cool localities is of the greatest importance, and care should be taken to avoid overheating or exposure to the sun. The nervous system should be given all the rest possible, as in cases of general nervous exhaustion. Medicinal treatment should be not by cathartics and an tiseptics for supposed ptomaines, but by thorough admin istration of nervous tonics and stimulants.—Boston *Med. and Surg. Journ.*

Contribution to the Diagnosis of Tumors of the Mediastinum.—A. Sokolowski found, in a patient 52 years old:

1. Extended dullness over the sternum, as well as on the right side of the chest.

2. Greatly-enlarged glands over the right collarbone.

3. Contraction of the right pupil.

4. Swelling, principally of the right of the body.

5. Considerable dilatation of the veins of the chest and abdomen. These symptoms, together with dyspnea, difficult swallowing, and gradual marasmus, served for diagnosing a tumor of the mediastinum which was demonstrated by autopsy. The microscopical examination proved the tumor to be a malignant sarcoma of the lymphatic glands. By exploratory puncture in the third right intercostal space pus was liberated, and autopsy proved that it came from one of the numerous bronchiectases which were in the right lung, the contents of which could not be evacuated on account of pressure produced on bronchi by secondary tumors disseminated in the lung.—*Gaz. Lekarska.*

A New Method of Determining Uric Acid.—W. Mizerski, basing himself upon his observation that uric acid precipitates silver from a solution of nitrate of silver and decomposes during this reaction, proposes the following method for determining uric acid in the urine: 50 cubic centimetres of urine are evaported in a little porcelain bowl, almost to dryness; to the remainder are added 8 to 10 cubic centimetres of hydrochloric acid, with the addition of 1 to 2 cubic centimeters of alcohol. The sediment, precipitated in this way, is washed with alcohol (90 per cent) until the reaction on the chlorine disappears, after which it is dissolved in 5 to 10 cubic centimetres of 1 per cent solution of carbonate of lithium. The solution obtained in this manner, after filtration, is added to 10 to 15 cubic centimeters of the solution of nitrate of silver, mixed with ammonia (1 cubic centimetre of solution of nitrate of silver equals 0.01 Ag.).

After precipitation of black sediment the liquid, after being boiled, is filtered, and, by sulpho cyanide of pot assium (Volhard's method), the remaining undecomposed part of nitrate of silver is fixed.—*Nowiny Lekarskie; Univ. Med. Journ.*

Neuritis Traumatica and its Simulation.—Higier describes two cases of neuritis traumatica. In the first case, after a blow in the back, a series of symptoms appeared, especially in the lower extremities, represented by reduction of muscular power and of sensation and of virile power, accompanied by constipation and retention of urine, concentric narrowing of the visual field on both sides, psychical symptoms and hallucinations of sight, depression, irirtability, and amnesia. In the second case, a week after luxation of the right ankle-joint, paralysis of the right foot appeared; a month later, contraction of muscles, but without the reaction of degeneration, other than that of Rumpf's traumatic reaction, accompanied by concentric narrowing of the field of vision in the right eye. Higier then analyzes a series of symptoms considered by the Germans as occurring in neuritis traumatica, in connection with simulation. He remarks that neuritis may be diagnosed only after exclusion of organic disorders of the nervous centres and other organs, and that special attention should be paid to anamnesis, which very often shows predisposition, as well as to the pyschical state of the patient. He favors the idea of simulation, but is inclined to believe that, the further the history of the case will be probed, the more will the doubt desrease. He oftener encounters exaggeration

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than simulation, the former being provoked by long examinations, influence of surroundings, uncertainty as to the result of the examination, etc He concludes:

1. That neuritis traumatica is the combination of the symptoms of hysteria and neurasthenia.

2. That there is no local, but general neuritis.

3. That to the symptoms which cannot be simulated belong the narrowing of the field of vision, Rumpf's reaction, diminution of galvanic irritability, Maunkopf's symptom, etc.

4. That the requirements of life-insurances and examination by many physicians favor the development of simulation.

5. That examination by a specialist alone should bear decisive significance.—*Gaz. Lekarska.*

A New Physical Sign for the Early Diagnosis of Croupous Pneumonia.—Dr F. H. Morison, writing in *The Lancet*, refers to the difficulty of the early diagnosis of pneumonia in children, and quotes Dr. Francis Moinet, in "Keating's Cyclopedia of Diseases of Children," who says: "In not a few cases no satisfactory results are obtained by auscultation and percussion until a comparatively late period, owing to the limited extent of the affected region and its position in the center of a lobe surrounded by healthy lung tissue." In several cases recently seen, where the general symptoms of pneumonia were present but none of the ordinary physical sings, Dr. Morison adds, I have discovered what I am venturing to describe as a new physical sign. On careful auscultation of the chest I have heard jerky expiration over a limited area, and on noting the position of this area have found developed in it subsequently the usual signs of pneumonia. This jerky expiration is the first physical sign developed and can be heard soon, if not immediately after the rigor, before dulness or crepitations appear. It is much more distinct in children, but I have also heard it in adults."—*Med. Rec.*

Reflex Hemianasarca.—Rendu (*La Sem Med.; Amer. Journ. of Med. Sci.*) has reported the case of a man who was seized with pain in the left side and posteriorly—at first dull, but subsequently sharp. He continued at his work, complaining, however, of headache, pain in the back, indigestion, anorexia, constipation, and a little cough; at night there was a little fever. At the end of three weeks the man presented a prominence at the base of the left half of the chest, with dulness on percussion; below the left clavicle the percussion note was tympanitic. Vocal fremitus was diminished; the heart was not displaced; at the angle of the scapula, blowing breathing and bronchophony were to be heard, but no egophony and no pectoriloquy. In the area of dulness the breath sounds were feeble; rales could not be heard. Upon the right side some fine rales were heard at the base, with some impairment of the percussion resonance. In the precordium pleuro-pericardial friction sounds could be heard. The heart was normal and the urine contained no albumin. By exclusion, a diagnosis of spleno-pneumonia of influenzal origin was made. Remittent fever, with vesperal exacerbations, persisted, notwithstanding the administration of quinine sulphate and the application of a blister to the chest. The pleural friction sounds disappeared, but the pulmonary signs and the dyspnea persited. The temperature remained slightly elevated. The bronchial breathing extended from the scapula to the base of the lung. Applications of wet cloths to the chest afforded relief, but interfered with perspiration. Finally, there suddenly developed, without appreciable cause, an edema of the chest-wall at the level at which the blowing breathing was heard, extending thence to the lumbar region and to the left thigh. At the same time local fremitus disappeared, the vesicular murmur became enfeebled, and egophony was heard in a circumscribed area. Exploratory puncture disclosed the existence of a serous effusion of small volume. The edema extended, progressively involving the trunk, the scrotum, the buttocks, the thighs, and the legs, predominating, however, upon the left side. Heart and urine still presented no abnormality. Fever persisting, the dyspnea and the general condition becoming more distressing, and the fluid continuing to accumulate, a portion of the effusion was evacuated by puncture. Dry cups, scarification, digitalis, purgation, and a milk diet were followed by no improvement. The fever, however, ultimately subsided, leaving anorexia, emaciation, cachexia, and anasarca, while the sings of pleural effusion became more and more pronounced, until the vocal fremitus had entirely disappeared and the breath sounds could no longer be heard. Rales were heard at at the base of the lung, but the heart was not displaced. The removal of some six ounces of fluid was followed by considerable relief. Thereafter the morbid phenomena gradually receded, the flow of urine became progressively augmented, and the edema gradually disappeared. Sleep and appetite returned and recovery ensued. The duration of the illness was about eleven weeks. The edema is explained upon the basis of a reflex paralysis of the vasomotor nerves of the affected regions secondary to the pulmonary condition.

Cremation and the Use of the Cremating Furnace in France.—The thrifty Parisians are proverbially expert in money saving devices (*Med. News*). While cremation is slowly progressing in popularity (49 cases in 1889, 159 in 1892) they utilize the cremation furnace of Pere Lachaise to dispose of the anatomic remains of the hospitals and dissection-rooms. This is much more economic than burial. During the last four years there have been no fewer than 11,852 incinerations of anatomic remains at Pere Lachaise. Each parcel represents a human body when the doctors and students have done with it. To this end 27,000 persons annually come to the city of Paris. All of them are supposed to be friendless, because their bodies are not claimed.

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MEDICAL SOCIETIES

Southwestern Association of Railway Surgeons.

The first meeting of this Association was held in St. Louis, October 25 and 27, 1893.

The President, Dr. F. J. Lutz called the meeting to order and Dr. W. B. Outten, Chairman of the Committee of Arrangements, announced that a feature of the meeting would be the holding of surgical clinics at the Alexian Brothers, City and Post-Graduate Hospitals.

Dr. A. B. Shaw, President of the St. Louis Medical Society, welcomed the Association to the city, and spoke of the importance of railway surgery and the growth of railway surgeons' associations.

The President then read his address. In explanation of the necessity of the existence of the Association, he referred to the underlying principle of all the mechanical arts—namely, the subdivision of labor. The rapid strides which the healing art has made no longer enables even the most brilliant mind to encompass the knowledge requisite to successfully cope with both disease and injury, and the subdivision into medicine and surgery was but the first step in the recognition of the fact that perfection in either means exclusive division to and discipline in the one. It is true the general surgeon so-called is the safer counsellor and a more successful practitioner of his art than he whose attention is riveted from the first to but a single subdivision of surgery. The latter is apt to forget and overlook those general principles of surgical knowledge which are the foundation for the successful application of our art. In the treatment of surgical affections the curative factors which determine the pathological change of the traumatic alteration of organs or members have occasioned a difference in the line of action. Tissues altered by disease offer a different resistance to the invasion of wound accidents than tissues whose vitality has been interfered with by injury. The removal of an ovarian tumor is a different kind of surgery from that which effects the removal of a crushed limb. In the one the tissues immediately concerned and the system at large have been prepared by a slow but constant alteration for the invasion of the surgeon's knife, their power of resistance has been increased. The healthy limb, suddenly crushed with its normal power of absorption and its normal nerve supply, which transmits the sudden insult and the unexpected injury with the rapidity of thought to the central nervous system presents a more dangerous field for the exercise of the surgical art.

AFTERNOON SESSION.

The afternoon session wes held at the City Hospital, and consisted of demonstration of surgical cases by local surgeons. Cases illustrating conservative surgery, were presented by Drs. W. B. Outten and W. A. McCandless.

Dr. McCandless also demonstrated a simplified method of applying plaster-of-Paris jackets, adapted to the cases of injury to the spine in railway accidents, or when the usual apparatus for extension is not at hand. A piece of toweling, or any strong cloth, is stretched between two firm bodies, a few feet from the ground. Upon this the patient is laid face downward, the long way of the cloth, and extension is secured by his pulling upon the edge of cloth above his head. A plaster bandage is now applied around the body, taking in cloth and all, the cloth above and below the bandage is cut away, and the patient is ready for removal.

An interesting case of a man injured by a train three years ago, was presented by Dr. H. H. Mudd. Six months after the accident a tumor developed on the right side of the body, inside of the eleventh rib, and three inches from the vertebral column. One year later the abscess discharged, leaving a sinus. Probing developed the presence of a calcareous deposit, felt about four inches from external opening. At the time of present operation, there was discharged through a drainage tube, a milky substance, found to be the contents of the intestinal canal. A tube was inserted into the stomach, into which air was forced, and a lighted match at the end of the drainge tube was extinguished by the current of air—also colored fluid pouring into the stomach, was almost immediately discharged through the drainage tube, indicating that the sinus was connected with the stomach. The operation consisted in an incision, four inches in length, from a point two inches from median line, downward and outward, parallel to lower costal margin A soft rubber catheter inserted into fistulous tract, from the external opening, was found to enter the duodenum at about the juncture of ascending and descending portion. The hole in the intestine, large enough to admit two fingers, was closed by suture.

EVENING SESSION.

Dr. W. B. Outten read a paper: "Injuries to Back Without Psychic Elements."

Dr. L. Bremer presented a paper on "Traumatic Neuroses in Court."

SECOND DAY—OCTOBER 27.

Clinics were held at the Post-Graduate, Alexian Brothers Hospitals, and consisted of operation for removal of large lipomatous growths from the neck, by Dr. H. Tuholske, and a gastrostomy and a tracheotomy for stenosis of pharynx by Dr. F. J. Lutz.

The following papers were read:

"Report of a Case of Abscess of the Brain," by Dr. R. L. Johnson, Rolla, Mo.

"Compression of the Brain," by Dr. J. E. Teft, of Springfield, Mo.

Dr. A. B. Shaw's Address and the papers read by Dr. Outten and Dr. Johnston will appear in an early issue of the REVIEW.

The following officers were elected for the ensuing year: President, Dr. C. A. Smith, of Tyler, Tex.; First Vice President, Dr. E. A. Neely, of Memphis, Tenn; Second Vice President, Dr. W. T. Jameson, of Palestine, Tex.; Secretary, Dr. J. A. Lightfoot, Texarkana, Ark.; Treasurer, Dr. L. H. Callaway, Nevada, Mo.

Next place of meeting, Memphis, Tenn.

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NOTES AND ITEMS

Dr. Wm. Porter has resigned the editorship of the *Clinique*, on account of the pressure of private work and Dr. Geo. Wagner has taken charge.

Dr. F. J. Lutz, Editor of the Surgical Department of the REVIEW, has been appointed Surgeon General of the National Guard of Missouri by the Governor of the State.

Excursion to Bermuda.—Dr. B. Mattison of Brooklyn is arranging a ten days excursion of medical men to Bermuda to sail Wednesday, January 8, 1894. Party limited to tuelœ. Unprecedentedly low rate offered. Dr. Mattison has visited Bermuda several times and tourists in his charge are assured of a de lightful sojourn in that "land of the lily and the rose." Details if desired.

Expenses of the Hospitals.—At the recent meeting of the Saturday and Sunday Hospital Association (*Med. Rec.*) it was shown that during the year the total expenses of maintaining the thirty-one hospitals under the Association's management had been $1,173,474.32. The thirty-one hospitals received 20 691 patients, of which number 15,417 were treated free, including 193,099 out door patient. And yet the younger doctors complain of the hard time!

According to the Paris correspondent of the *British Medical Journal* all the Paris hospitals will be pro ided with special stoves for burning bandages, dress- gs and sweeping of wards. Experiments have been made in this direction at the Lariboisiere Hospital and have proved satisfactory. Formerly the old dressings were put into the dust bin and sold by the hospital servants at a good price to the rag collectors, who washed them and it is said resold them to cigarette paper makers. L.

Pure Milk for Babies and Rules for Dairymen.—The Committee on Dairies, Section on Pediatrics, New York Academy of Medicine, reported as follows:

"It having been conclusively demonstrated that a great and dangerous source of contamination of milk comes from dirt and filth from the cow's coat, bag, and udders, and from the milkmen's hands, it is especially requested by a committee appointed by the Pediatric Section of the New York Academy of Medicine that dairymen see that all visible dirt be removed from the cow's coat immediately before each milking, and that e bag and udders are cleansed at the time of milking, d that the milkmen wash their hands thoroughly with ap and water before milking. Antiseptic surgery has proven that absolute cleanliness is a preventive of germ contamination. Milk is a most fertile fluid for germs of all kinds when they have once gained access to it. By means of absolute cleanliness in the manner already indicated the most prolific source of disease from contaminated milk will be avoided. Again, it is an established fact that numerous epidemics of contagious diseases in the cities and towns have originated from infected milk, such epidemics having been frequently traced to the milk. Infection of the milk in these cases is generally due to the milkmen being in attendance on some patients with contagious disease at the time, or in his handling or cleaning cans or jars in which milk is to be transported, or from the sick themselves performing the some duties, either at the outset of an illness or durning convalescence.

"Still another common source of infection is from washing the cans and jars in impure water. Creek water should be regarded as dangerous for the cleansing of vessels. It is therefore urged that only spring water or pure well water be used for washing all milk utensils. We urgently appeal to the dairymen to assist us in preventing this great source of disease and death from the one and only proper food of infants and children. If farmers would put into practice these simple suggestions, they would soon drive from the market all 'infant foods' which are now so largely sold at enormous profits."—*Med. Rec.*

New York Cancer Hospital.—An examination for position of Junior Surgeon on the House Staff will be held at the New York Cancer Hospital, 106th Street and Eight Avenue, on Wednesday, October 25, 1893, at 2.30 P.M. The term of service is twelve months; four as Junior Assistant, four as Senior Assistant, and four as House Surgeon. Application may be made to Dr. B. F. Curtis, 307 Madison Avenue, between 5 and 6 P.M. Fully seventy-five per cent are major operations, and the experience in gynecology and general surgery is especially desirable; the number of surgical cases and operation comparing favorably with any large general hospital.

Doctors and Reporters.—In a recent address on journalism, Mr. Chas. A. Dana (*Med. Rec.*) indicated certain qualities as desirable for the journalist, which we should say were also particularly necessary for a physician. Mr. Dana says: "There is no question that accuracy, the faculty of seeing a thing as it is, of knowing, for instance, that it is two and one quarter and not two and three eighths, and saying so, that is one of the first and most precious ends of a good education. Next to that, I would put the ability to know how and where most promptly to look for what you don't know, and what you want to know. Thirdly, I would put Dr. Walker's great object, being able to tell what you know, and to tell it accurately, precisely, without exaggeration, without prejudice, the fact just as it is, whether it be a report of a baseball game, or of a sermon, or of a lecture

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on electricity, whatever it may be, to get the thing exactly as it is. The man who can do that is a very well-educated man."

It is this accuracy of observation which is particularly needed by medical men, and which their training ought to secure to them. We believe that to a large measure it does, and that physisians as a class are the most observant of people. The reporter, unhappily, is taught by the exigencies of competitive jurnalism to see, or at least to record, a little more than exists. He must have an interesting story, or the blue pencil goes through his copy.

Medical Education.—Writers on this subject devote no end of space to showing the ill effects of defective education in students but, as a rule, devote little attention to deficiencies in professors (*Western Medical Reporter*). No school will ever have students of higher grade than it demands, for the law of supply and demand is as strong here as in the world of trade. Ill educated professors will not attract well educated classes. Dr. A. Jacobi, at the last annual dinner of the Harvard Medical Alumni Association, described aptly how professional chairs are filled.

He said: "There are many ways of becoming or appointing professors, some of which are as follows: Thirty years ago I was offered the place of professor of diseases of children. I replied I could not think of accepting, I did not know enough. My friend who was a professor and knew all about it, laughed, and replied, if he were offered a chair of nautics, he would begin lecturing to morrow. That is, gentlemen, how I became professor of pediatrics, only because there was no place vacant for a Columbus. Others are cousins, friends, assistants in private practice. To be rich, well connected, and have relatives among hospital and college trustees is a very good mental equipment. Have a friend who is wealthy and endow a chair for you. In Germany, be a son in-law of a leading professor. But lately I read of the death of a German Privatdocent, at the ripe age of seventy-four whom I knew when he was already Privatdocent, but proved his incapacity for advancement by refusing to marry the daughter of the full chair. Write a text book while you are young and fresh. There are so many that you can extract half a dozen, and make the seventh with the aid of very little brains and much more posteriora. Operate on two alleged lacerations daily, and let no more than fifty per cent die of septicemia. Prove that the best place for ovaries is in a jar. Render yourself a parody of the great Philadelphian who makes a diagnosis before he cuts babies' skulls, by sawing without diagnosis. The first is seen and heard of; the latter is not. On that line there are many possibilities."

Annual Report of the Marine-Hospital Service.—The annual report of the Supervising Surgeon-General of the Marine-Hospital Service of the United States for the fiscal year ending June 30, 1892, is the nineteenth annual report, though it covers the ninety-third year of the service. It also contains mention of many matters outside of the statistical reports of the hospital service which have occurred up to November 30, 1892.

Certain facts in regard to the composition of the service which occupy the first of the report are not only very interesting but also of great value as indicative of the character of the men upon whom the grave responsibilities of the service are placed

During the year two boards convened for the examination of applicants for admission to the medical corps. Fifty-seven applied for permission to appear before the boards; twenty-seven actually presented themself; and seven only were successful in passing the examinations.

The death of one of the most respected officers of the corps gives occasion for an appreciative notice of the man and also for a general notice of the liability to casualities in the service. Two of the medical officers are suffering from tuberculosis contracted, in one case, "undoubtedly in the performance of his hospital work," and, in the other, "hastened in its progress doubtless by the exposure and severe duty imposed upon him as officer in command of the Delaware Breakwater Quarantine." At least two officers have contracted small-pox, and quite a number have suffered in others ways.

Four different officers have died of yellow fever since 1878. A most pathetic letter from the wife of one of these officers draws attention to the fact that absolutely no provision is made for the families of those who fall in this service. The surgeon general belives that upon fair representation at least some such provision might be made as has already been made for the benefit of officers and men of the Life-Saving Service, where a man's family, in the event of his death at his post receives an amount equal to a full salary for two years.

Naturally, cholera occupies a very large share of the report; and the subjest is treated in an interesting manner, giving a short history of the present epidemic and the documentary history of the efforts of the general government to control the importation of the disease; yellow fever and small-pox have also demanded attention, and are the subjects of some interesting documents.

It has been the custom for many years to append to the reports of the service, reports on interesting cases and operations, and also reports of fatal cases with the necropsies. These reports are growing in interest and value from year to year; and it is to be hoped that their possible value will be so fully recognized that greater care may be bestowed upon them.

As to the operations of the service in connection with the treatment of sailors of the merchant marine, the report shows that the total number of men treated was 53,610. The total number treated in hospital was 16,022. There were 479 deaths, and the amount expended was $512,657.18.

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Fehr's Talcum Powder is the finest thing for chafing and roughness known to the profession. Send for a trial box.

The Highest awards and medals at the World's Fair were given to Reed & Carnrick's Infant Foods and Kumysgen.

Obstinate Dysmenorrhea.—I used Dioviburnia in a case of obstinate dysmenorrhea and was much pleased with the result. T. N. BONE, M.D., Loda, Ill.

Salo-Sedatus for Aches and Pains.—Dr. Frank John, of Gladish, Texas, says: I am well pleased with Salo-Sedatus. It beats anything I have tried in the aches and pains so common in fevers generally; and it rapidly reduces temperature.

Dioviburnia is a most excellent preparation, and I am delighted with it. Our local druggists now handle it and I am prescribing it daily. FRANK STUBBLEFIELD, M.D., Greenfield, Ill.

Planten's Capsules for over half a century have been known to be reliable. They are the best of American manufacture as well as the cheapest. All kinds of soluble-hard; elastic-soft and filled capsules are made by H. Planten & Son, New York, N. Y.

In Prescribing the products of manufacturing pharmacists, we should be guided to a great extent by the business standing of the manufacturers. No other house in the South or West has a better reputation for strict integrity than the firm of R. A. Robinson & Co., Louisville, Ky. We do not hesitate to recommend their preparations.

TROY, N. Y., November 5, 1893.
DIOS CHEMICAL CO., ST. LOUIS, MO.—
GENTLEMEN—I have dispensed Sennine which has proved very satisfactory to me. I have been unable to purchase the remedy at any drug house. So I enclose one dollar for which please send me a two ounce box, and greatly oblige.
Yours very truly, G. W. HARDER, M.D.

Thirteen Years have now elapsed since the introduction of Scott's Emulsion of Pure Norwegian Cod Liver Oil with Hypophosphites of Lime and Soda, since which time its growth and development have been very large, not only in this country, but in South America, Great Britain, and a large part of Continental Europe. It has, in a very large degree, supplanted the plain cod liver oil. Its success is largely due to the happy combination of all its components, making a perfect chemical union that will not separate for years.

Overworked and Ill-Nourished Women.—I have found Dioviburnia a most useful remedy in dysmenorrhea, and in those functional disorders so frequent in over-worked, ill-nourished women it has proved itself reliable and efficient.
R. E. FARRIS, M.D., Anna, Ill.

Bryce's Pocket Practice. A Complete and Condensed work on the Practice of Medicine for Physicians and Students. By Clarence E. Bryce, M.D., Author of "Bryce's Visiting List"; Author of "The Physician's Companion"; Member of the American Medical Press Association. Copyrighted, 1892. All rights reserved. St. Louis, Mo.: J. H. Chambers & Co., 914 Locust Street. Price, $1.00.

This little book is a *multum in parvo* work in the truest sense of the word. It possesses many features that should commend it to physicians. The fact that it is written by a well-known medical editor is sufficient guarantee of its merits.—Nashville *Med. and Surg. Jour.*

Prolapsus Uteri with General Pains.—I am using Dioviburnia in a case of prolapsus with general pains; it is doing well. I think the sample bottle will effect a cure.
S. S. BLANKENSHIP, M.D., Browning, Ill.

Andunea has proved a remedy of great merit, and especially recommended in treatment of la grippe, also malarial, bilious and typhoid fevers. Dr. Joseph N. Davis, of Kansas City, Kan., writes: The samples of Andunea gave entire satisfaction. In a case of severe menstrual headache it did excellent work. Andunea also did splendid service in a case of threatened peritonitis. Kindly forward two more cans.

SMITHFIELD, N. C., November 7, 1893.
DIOS CHEMICAL CO., ST. LOUIS, MO.—
I have used "Sennine" and like it very much. Please send two ounce tin box, perforated, for which I enclose one dollar, and oblige. Yours, etc.,
GEO. J. ROBINSON, M.D.

Elixir Six Aperiens consisting as it does of six of the choicest laxatives in the materia medica, is invaluable as an aperient, for it acts on the entire alimentary tract and is one of the safest laxatives for prolonged use. Its action unattended with nausea and griping produces fecal rather than watery discharges and the feculant secretion indicates the presence of bile.

Neurosine in Epilepsy.—Since Brown-Sequard formulated his celebrated mixture of the bromides these have everywhere been regarded as the "sheet anchor" in the treatment of epilepsy, and whatever progress has been made, has only been in the line of additions to these efficient remedies. Hammond (Diseases of the Nervous System) says: "The treatment of epilepsy rests solely on experience. * * * Among medical remedies the bromides stand preeminent and should be thoroughly tried first in every case." He adds: "Herpin, several years ago, called attention to the salts of zinc in the treatment of epilepsy. * * * I have used the lactate, and still more recently, the bromide, with very definitely beneficial results." (Pages 714-716).

Lauder Brunton says of the bromides of potassium: "It is especially beneficial in epilepsy and by its use the convulsions can almost always be lessened if not entirely stopped." (Therapeutics, etc., p. 521).

Allen McLane Hamilton says of the treatment of epilepsy: "No general remedies have been of so much service as the bromides, especially those of sodium, ammonium and potassium, and since their introduction about twenty years ago, the number of cures has greatly increased and the prognosis improved, as our knowledge, derived from experimental therapeutics has broadened." (Reference Hand-Book, vol. ii, p. 708).

The literature upon this subject is so vast that volumes might be filled with quotations from standard authorities only, but our desire is to make the briefest reference to these with the view of calling attention to our elegant preparation of the usual bromides, together with bromide of zinc and the pure and reliable extracts of Cannabis Indica and Belladonna. Since Trousseau announced the great efficacy of Belladonna in the "Petit Mal," it has held high rank as an admirable addition to the bromides. Of Cannabis Indica it is well said: In morbid states of the system it has been found to cause sleep, to allay spasm, to compose nervous disquietude and to relieve pain. In this respect it resembles opium, but it differs from that narcotic, in not diminishing the appetite, checking the secretions, or constipating the bowels." (U. S. Disp., p. 351). It is only reliable when properly prepared from a pure specimen.

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ORIGINAL ARTICLES

Antisepsis and Antiseptics.

III—HISTORY.

BY CHARLES MILTON BUCHANAN, M.D.,

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[CONTINUED.]

The eighteenth century is somewhat remarkable for its dearth of illustrious names in the history of antisepsis, for very little true progress has been made at all in that period.

Augustin Belloste (1700) reiterated the teachings of Magatus, to whom he allied himself. He insisted more particularly upon coaptation—even of bony structures.

Parmanus (1706) made use of a lotion of his own by virtue of which he claimed to be able to "resist putrefaction, prevent ill accidents and take away the pain and inflammation of a wound" This he used in the treatment of all wounds, keeping the dressings moistened with it constantly and changing them every two or three days.

Anel (1706) in the same year published his method of evacuating abscesses by a process of aspiration which left no open wound—similar in fact to the method of removing blood from the chest which was originated by Delacroix in 1573.

Boerhaave (1720), so well known in the history of the development of the science of chemistry, claimed that the absorption of pus caused internal abscesses; this was a step in the direction of the somewhat more modern pyemia.

Col de Villars (1741) insisted that dressings should be frequently changed, in order to prevent putrefaction.

Heister (1753) made extensive use of balsams in order to remove anything that might hinder the natural processes, especially suppuration—which he classed as such. In order to remove the products of suppuration which he correctly deemed unwholesome, he made use of drainage by means of openings and counter-openings.

Bilguer (1764) was accustomed to fill all of the recesses of a wound with an antiseptic substance and to lay over the wound a piece of lint which had been dipped in an antiseptic solution. He decried the almost universal custom of promiscuous amputation which he inveighed mercilessly. Indeed, he claimed that amputation might be almost totally dispensed with and gave both facts and figures to uphold his teachings.

Dr. Pringle, in his *Observations on Diseases of the Army*, published in London in 1765, called the attention of the medical profession to the fact that cinchona bark, whether used in decoction or in powder possessed the power of preventing putrefaction of flesh for a time. The peculiar antiseptic qualities of cinchona and quinia have been more recently investigated and confirmed by Mayer, Pavisi, Hallier, Herbst, Polli Binz and Bochefontaine.

Percival Pott (1768) sealed wounds very effectually in cases of compound fracture; but, at the same time he insisted upon the maintenance of proper drainage by means of openings and counter openings.

The valuable preservative effects of sulphurous acid its gaseous anhydride and its salts were known as early as the year 1771.

Muller (1773) made an attempt to classify the minute organisms which had been observed by others. Although Leeuwenhoeck first observed micro-organisms in 167[illegible] it was nearly a century before an attempt was made to define the character of these organisms and to classify them. The knowledge of the subject possessed at this time was of a most rudimentary and elementary nature hence Muller's work possesses naught of interest save the fact that his was the first definite attempt at systematic classification.

Benjamin Bell (1784) made use of drainage in wounds, using leaden tubes for that purpose. He advised the employment of simple wound dressing, and also that all punctures of the skin, etc., should be valvular in character so as to prevent free access of air and objectionable matters to the wound.

In 1785, Lombard and Percy learned that a certain Alsatian physician possessed an infallible remedy for wounds. This infallible remedy proved to be pure river water which was used with magic phrases and incantations. Upon trial they found the water to posses

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the same efficacious virtues even when used without the magic phrases.

John Hunter (1792) taught that air was harmless as far as its influence upon wounds was concerned and that inflammation was due to an inherent tendency of wounds. He instituted researches on the healing of wounds beneath a scab—these researches were of much importance and interest. He also maintained that the process of healing must be left to Nature

August Gottlieb Richter (1799) made use of openings and counter-openings for aid in the removal of pus.

And thus the century closes, without one discovery of importance, devoid even of one plausible and important theory. Down to the time of Priestley's discovery of oxygen, August 1, 1774, the deleterious effects of air, with few exceptions, were supposed to be due largely to temperature. Pare had declared it as his belief that such effects were due to miasms; others looked upon the putrefaction of the discharges from the wound as the source of the evil and, as in the cases of Colbatch and Bilguer, succeeded sometimes in preventing such putrefaction. Mayow, in the latter part of the seventeenth century, declared that all fermentation was due to the "nitro aerial spirit" of the air—from his accurate description this "nitro-aerial spirit" was nothing more nor less than our modern oxygen. Benjamin Bell however, in the latter part of the eighteenth century, discarded all of these views, holding that the trouble was caused chiefly by "fixed air" (carbon di oxid) This view of Bell's, erroneous as it was, was developed and accepted by many, down until the very days of modern antiseptic surgery.

The first name of any interest to attract our attention in the inception of the present century is that of Von Kern. He (1809) made the claim that the only essentials in the treatment of wounds were cold water for the arrest of hemorrhage, warm water for dressing, some small pieces of lint, absolute mechanical rest and artificial heat. So popular did these views become that they were adopted by Von Walther of Bonn, Fritze of Prague and by Lister himself—indeed these methods of wound treatment continued in vogue in England until about thirty years ago.

The antiseptic and preservative properties of coal-tar were recognized by Chaumette (1815), by Guibourt (1833), by Sivet (1836), and by Bayard (1846). The famous panacea, tar water, recommended so highly and extravagantly by the celebrated Bishop Berkley has become a matter of history, although as far as practical use is concerned it sleeps the sleep of eternal oblivion.

Constant and intermittent irrigations of wounds was recommended by many throughout the present century but has been associated with the name of Langenbeck since the year 1839.

However, before the processes of fermentation and putrefaction could be thoroughly understood the microscope had to be invented and brought to some degree of perfection. Leeuwenhoeck, in 1680, found yeast to be a mass of globules but he had not the slightest conception of the fact that they were living organisms; this fact it remained for Caignard de la Tour to elucidate in 1836, which was the first step toward the establishment of the rudimentary tenets of what was to develop into the germ theory of disease. In the year 1836 Caignard de la Tour determined that the yeast plant (Torula cerevisiæ or Saccharomyces cerevisiæ) was a microscopic vegetable cell which, through increase in the number of cells, broke up sugar into alcohol and carbon di oxid. With the death of the yeast cell or when, through any cause, it could increase no longer fermentation ceased.

In this same year Schulze proved that putrefaction was not due to oxygen. Gay Lussac had held that putrefaction did not take place in hermetically sealed vessels because the oxygen was excluded therefrom. This objection Franz Schulze met by admitting air which had been drawn through strong sulphuric acid to boiled putrescible liquids; in which case putrefaction did not supervene, thus confuting Gay-Lussac's doctrine utterly. This was confirmed by Schwann (1839), Ure (1840) and Helmholtz (1843).

In the same year in which Caignard de la Tour made his discovery and Schulze confuted Gay-Lussac's doctrine, Donne (1836) noticed micro-organisms in pus and also in chancrous pus—the latter different from the former and causing its virulence. In the following year Beauperthuis and Adet de Roseville noticed the latter organisms and declared them to be the cause of putrefaction, in the next year (1838).

In 1837 Schwann of Berlin published the results of a remarkable series of experiments in the phenomena of putrefaction, proving them due to organisms and not to the oxygen of the air. His experiments proved that meat and other albumenoids became decomposed by the germs resident in the atmosphere; he clearly established the connection between putrefaction and microscopic life, but thirty years elapsed before Lister extended to wounds and living flesh the results of the researches of Schwann upon dead flesh and animal infusions. Prior to Lister himself the possibility of some such extension of the principles had occurred to other minds, such as Beauperthuis and Adet de Roseville. Penetrative, thoughtful minds had appreciated the fact that the germs which could cause putrefaction of meat and dead flesh might also act with fatal effect upon the living flesh in the hospital or sick room. Although the views of Caignard de la Tour, Schwann and Schulze were tested and confirmed by many learned investigators, such as Ure and Helmholtz, they did not receive the attention due them, they obtained no general recognition but remained the property of a few skilled experimenters. It was admitted that the fermentation of sugar was due to the torulæ but it was not admitted that putrefaction was due to precisely analogous agencies, yet the two processes present more than merely striking parallels.

In 1841 Dujardin, who had devoted considerable attention to the subject, classed bacteria among the infu-

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soria. In 1843 Helmholtz confirmed the doctrines of Schwann and Schulze.

In 1849 Pollender declared that he had observed organisms in the blood of animals that had died of splenic fever (anthrax).

In 1850 two distinguished French observers, M. Davainne and M. Rayer, noticed small organisms like transparent rods in the blood of animals dying with splenic fever. They, at that time, however, attached no especial importance to the discovery of this fact. Eleven years later Pasteur published his masterly memoir on the fermentation of butyric acid and described the organism which provoked and caused such fermentation; after reading this memoir Davainne came to the conclusion that splenic fever might also be caused by a fermentation or putrefaction set up and provoked by the germs which he and Rayer had observed in 1850. This idea has been placed beyond the pale of a peradventure by subsequent researches.

Up to the year 1850 the existence of micro-organisms had been confirmed by the investigations of many scientists, but the spores or germinal elements of the microbean cells were first observed by Perty in 1852 and by Robin in 1853.

In the year 1854 a very simple but important discovery was made by Schroeder and Von Dusch; this was the discovery of the fact that a plug of cotton wool or raw cotton placed in the mouth of test tubes would preserve even nutrient media contained therein from infection and consequent putrefaction. Simple as this discovery was, it has been of great service in practical and laboratory work in bacteriology.

In 1856 Panum demonstrated that inflammation of the intestinal tract of animals poisoned by decomposing matter was due to a chemical substance which was not destroyed by heat. This was probably one of the first observations of any value made as to the detrimental action of the products of germ excrementition or elaboration. Somewhat later Schmiedeberg and Bergmann isolated from fecal matter a crystalline substace which they called sepsin. They determined that when this substance was introduced into bodies it caused symptoms which were peculiarly analogous to those of the condition known as septicemia. As interesting and important as were these observations of Panum, Schmiedeberg and Bergmann they were practically devoid of any influence whatever upon current medical practice.

In the period from 1857 to 1861 Polli of Milan made extensive observations upon the power of sulphurous acid and the sulphites in arresting fermentative and putrefactive processes. As a result of his numerous experiments and observations he initiated and formulated a plan for their use and administration in certain diseases which he thought caused by such conditions, that is, in zymotic diseases. In this same period Calvert had demonstrated that carbolic or phenic acid, which was always present in coal tar, was a powerful disinfectant and that it had been used in Manchester in 1857 for the preservation of dead bodies.

In 1859 M. Duvaine attempted a new classification of micro-organisms, placing them in the vegetable kingdom.

In 1860 Pasteur demonstrated that a temperature of 110°–112°C. (the boiling point of water being 100°C.) was sufficient to completely sterilize. In the next year (1861) he published his memoir upon butyric fermentation and the organism provoking it—it was this essay that convinced Davainne (1863) that the organisms which, in 1850, he and Rayer had observed in the blood of animals infected with splenic fever (anthrax) were the cause of the disease and he so announced his belief.

Since the time of the discovery of the yeast plant by Caignard de la Tour the question of the origin of such organisms had been one which had given rise to continuous discussion and investigation on the part of a few. In 1862 Pasteur published a memoir in the *Annales de Chimie* which marked the inauguration of a new epoch; to the continuation of the investigations therein first set forth he has devoted the whole of the remainder of his life. His solutions of the secrets of vinous, acetic and butyric fermentations unlocked the secrets of putrefactive fermentation—a discovery whose inestimable value we can only duly appreciate when we consider the woes which these wafted particles of microscopic life have caused in ages both historic and prehistoric. Compared with this record the mortalities of the world's battlefields pale into insignificance itself.

In this same year (1862) Dr. William Budd drew up a series of suggestions for the investigation of epidemic and epizootic diseases. To this he adds: "What we most want to know in regard to this whole group of diseases is where, and how, the *specific* poisons which cause them *breed* and *multiply*." There cannot be the slightest doubt, after perusal of this passage, that Dr. Budd had what might be considered—even at this day—a good modern conception of the subject, for his ominous words are in no sense ambiguous.

In the next year (1863) Lemaire, stimulated by Calvert's investigations into the antiseptic properties of carbolic acid and by numerous similar facts which had been laid before the Committee of the French Academy studied the subject diligently. The results he embodied in his memoir "De l'acide phenique", published in 1863. In this essay he recognized the germ theory of disease as the actual basis of antiseptic surgery and was one of the first to recognize its extensive use in the treatment of wounds. He extended the already existing belief in the preservative properties of carbolic acid and coal tar—for the Egyptians themselves used pyroligneous acid, creosote and analogous compounds for these very purposes in the preparation of their mummies.

These, the first six decades of the present century, mark an important era in the development and growth of the belief and practice which was to pervade the latter decades of the century, much to its enlightenment and much to the value of the science of medicine whose prophylactic functions at least are thereby greatl widened. Among the many men of note in the perio

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among even so many worthy investigators Pasteur, as yet, stands head and shoulder above them all. Although the views of de la Tour, of Schwann and of Schulze were confirmed by several trustworthy investigators yet they made no marked impression, remaining the property solely of a few skilled investigators. It was Pasteur who first conclusively convinced the scientific world. Because of his precision and accuracy his experiments remain, even to day, unimpugned and above reproach. Pasteur's observations first resulted in facts of value—especially from a surgical and medical stand point. The practical application has saved the vineyards of France from the dreaded depredations of phylloxera and has prevented and eradicated many parasitic diseases of both plant and animal life. But most of all they enabled Lister to formulate his immortal system of antiseptic surgery which has saved many useful lives. He first claimed that the processes of fermentation, decomposition, suppuration and the occurrence of contagious diseases were all due to the presence of micro-organisms—which principle he called *contagium animatum*. He also claimed that the processes which were due to the access, proliferation and multiplication of germs might be prevented by securing non-access of such germs.

He was not the first nor was he the only one to ob serve the facts embodied in his *contagium animatum* or infection by an organism, for the belief in its rudimentary state can be traced back to the year 1700 when the question was warmly discussed under the subject of spontaneous generation. Nevertheless his work, his investigations, his discoveries prepared and paved the way for the deductions of Lister who himself acknowledges his indebtedness to Pasteur and his researches.

In 1874 Spencer Wells, before the British Medical Association, pointed out the fact that the recent experiments of Pasteur had "all a very important bearing upon the development of purulent inflammation and the whole class of diseases most fatal in hospitals and other overcrowded places." He said further: "Their influence (germs) on the propagation of epidemic and contagious diseases has yet to be made out." Strange to say, though he recognized and admitted the effect and power of the organisms, he introduced no systematic method of combating them or of eliminating their injurious effects and yet in his own particular and peculiar sphere of practice has antiseptic surgery been most conspicuous and complete in its triumph.

As we observe, the time is now ripe, medical theory and practice is ready to receive the truths of a new and doughty champion whose work prior to this time would doubtless have fallen upon sterile and unfruitful soil. The time has come when the efforts are to be crystallized, or the blossom to merge into the tangible fruit. Only at this particular time would his advent have been successful and at the precise moment of the need of his trenchant blade Joseph Lister steps into the arena.

Fractures and the Plaster Dressing as Viewed by a General Practitioner.

BY ROBERT F. BROOKS, M.D., CARTHAGE, MO.

We are to consider many things while treating fractures.

The setting of the bones, the manner and use of extension, splints, rollers and plasters to adhere to the skin, the making a suitable bed and keeping it properly, consideration of the general treatment of the patient as well as the local treatment.

Many surgeons, and of these some good ones, use the immovable plaster-of Paris or a similar material as a dressing from first to last in fractures.

In simple fractures where there is but little swelling, and where the case is handy to all, no doubt much trouble is saved in the use of an immovable dressing. If there is much swelling or a liability to it, it is safer, especially for the general practitioner, to use some other method.

Many consider a thick layer of cotton next the skin a safeguard for retention. This is a great help, but when swelling subsides it will not prevent the broken parts from rattling!

Some surgeons claim that with antisepsis, compound fractures may be encased in plaster, making provision for drainage. They use bracketed splints.

Packard, of Philadelphia (In. Cy. Surgery vol. 4, pp. 245–251), does not like plaster as a primary dressing, because it prevents the necessary constant inspection of the limb. In comminuted fractures of the leg he uses a box and swings it, nor does he like bracketed splints, and thinks most practitioners had better rely on simpler means. Agnew (vol. 1, p. 737) says the proper time to use plaster is after the swelling has gone down.

Suppose in place of plaster which is heavy and unwieldy and soon smeared with discharge in a comminuted fracture you use a Hodgen's splint or a swinging box. Your patient is far more comfortable, unless you swing the plaster splint, while you are enabled to see the contour of the limb and to keep the parts very clean. You do not depend altogether on the thermometer to tell you that pus is collecting at some point, nor go to the prodigious trouble of making a new bracketed splint in case a new abscess forms.

One time I put one of those hinged plaster splints on a leg with a Pott's fracture. The man was middle aged and was fat and heavy. The leg swelled much under the splint, the pain became intolerable so that I had to take it off. Blisters appeared. This occurred in less than 24 hours.

The application of plaster requires much care and skill, though my medical neighbors whether skilful or not are ready and eager to put it on at first.

A young doctor in our vicinity, a graduate of a reputable college, uses plaster for all fractures, even of the ribs and clavicle! In another town a surgeon dressed a broken leg with plaster. It seemed to him to be doing

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well, though he could'nt see the contour of the leg. When the dressing was taken off the leg was very crooked.

In another case of fracture of the shaft of the femur a doctor applied a thick plaster casing to the thigh only. The splint reached from patella to groin, nor was there even a roller from toes to knee.

I have just seen a man, who eight months ago broke his femur in middle one-third. He goes on a crutch and cannot now bear his weight on his foot. He has an enormous callus and a shortening of two and a half inches! He was encased in plaster by two reputable doctors who waited thirty-five days before they removed the casing!

In another case and another town a lad had a simple fracture of the humerus. Two doctors attended him. They applied a plaster casing from hand to shoulder. But great pain settled in the arm, the fingers became swollen, cold, and purple. The doctors took off the dressing.

Stimson (Fractures) declares that a first or primary plaster dressing must be seen frequently in the first forty hours. In a hospital with a resident surgeon that might do, but it is too risky and dangerous for a general practitioner. Almost a lifetime of success with plaster will not condone one case of gangrene or bad sloughing.

I do not think it good practice to use plaster as primary dressing in the humerus, femur, or forearm; I think the weight of authorities is against it.

I consider that there is a great difference in the gravity of even simple fractures. A simple fracture of the shaft of a bone, transverse and caused by a minimum of violence may be followed by but little swelling and inflammation. A cure is readily affected and there is little or no attendant pain. On the other hand, a simple fracture may be oblique or splintered. There may be a subcutaneous tearing of the tissues and blood vessels. Swelling and inflammation are necessary results. A joint may be invaded and arthritis induced; Anchylosis may follow, ostitis may follow, then necrosis; or there may be suppuration of the joint. Stimson (Fractures, p. 226) says that a "prominent German surgeon has expressed the view that a fracture is now to be considered rather as an inconvenience than as a misfortune," Stimson thinks this too sweeping a remark and that not only a compound fracture but a simple one may endanger life; that crippling may follow for a considerable period and may be permanent.

Doctors are sometimes to blame; they may be pig-headed, as in the following case. A vigorous young man had a simple fracture of the shaft of the humerus A couple of doctors dressed the arm, binding it up with some kind of stiff splints. In some cases perhaps their method of treatment would have done well enough, but it happened in this case that one of the fragments was pressed against the vessels and nerves of the arm causing swelling and terrible pain.

The man begged to have his arm redressed. The doctors would not do this, saying that he was all right and must endure the pain. In a short time gangrene appeared in the hand, and when I saw him an amputation had to be done. I do not think pain can always be relieved by redressing but it is safer to do it. I have had patients who complained very much until a new dressing was applied and where I could see no reason for their complaints;on the other hand I have found too much pressure on some spot which, being removed, produced comfort. In any case where there is at first great inflammation swelling and pain, it is better to support the limb on a pillow, or a padded board or on strips of cloth attached to iron rods so that lotions or cooling irrigations can be used.

I, in a fracture of the radius near the wrist where a man had fallen several feet on his hand I dressed it as usual in padded boards but not tightly drawn together.

The man complained so much of pain that I took off the dressing and laid the forearm on a board for about a week and applied cooling lotions. I then redressed it with splints, and he got along without pain and got well. A farmer, over 60 years of age was kicked by a horse, producing a compound fracture in the lower third of the humerus. In a day or two erysipelas attacked the wound so that I could not apply snug dressings. When the erysipelas was gone I put on a dressing of plaster rubbed in cheese cloth. This casing extended from the hand to the shoulder. I cut a door for the exit of pus and was well pleased for a few days, but I could not keep the pus from seeping under the dressing; I could not keep it from stinking. My patient complained so much of the bad smell that I redressed it and varnished it with paraffine.

But in spite of all my pains, I could not keep it sweet, and abandoned the plaster for an anterior angular splint that allowed the arm to be easily and thoroughly cleansed.

As I said above, this man had an attack of erysipelas. Malgaigne (Stimson Fractures, p. 204) says erysipelas generally retards the solidification of the callus. It was so in this case. Long after the wound healed the fragments remained ununited. I despaired of getting a useful arm. I gave him tonics and had him exercise by walking in the open air every day. On account of the stiffness of the elbow he had to keep the arm steady with an angular splint. I used passive motion for wrist and fingers. After several months the fragments united and he had a fairly useful arm with considerable motion of the elbow. This man had extraordinary confidence, patience and courage, or he could not have got so good a cure.

A strong man, about 35 years old, fell down a mining shaft over 100 feet. In his descent he felt that he would strike head first. So he put out his arms hoping to reach the wall of the shaft. He succeeded and turned a sommersault before alighting. He fell on his left foot, side and arm. There was a compound fracture of the left humerus, the lower third. The lower fragment or fragments were comminuted, one of the condyles

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was torn from the elbow joint. The sharp ends of the fragments had torn larger holes through the muscles and skin posteriorly. The periosteum was stripped off the sharp ends. I turned out these ends and sawed off little pieces so the bones would not pierce the flesh at every movement of the arm The vessels and nerves were uninjured. Dressing antiseptically, I flexed the arm slightly and laid it in a bran box, but I found too much movement with this method and so suspended it on iron rods and pieces of cloth on the principle of a Hodgen's splint, getting a little extension. In ten days I was able to flex the arm to a right angle and put on an anterior tin splint reaching from shoulder to hand and sling the arm.

In a little over two months the fragments united. After a certain time I used passive motion to obtain some pronation and supination and flexion of wrist and fingers. Finally the elbow joint was slightly movable with hope of more extensive motion.

The great shock and traumatic fever following this terrible fall were withstood by wonderful vitality; while a minimum tension of the wounds and free drainage conspired to cure.

The encasement of limbs with plaster need have but a limited use. A distinguished surgeon of Boston lately lectured on the treatment of fractures (*B. M. and Surg. Jour.* Aug. 10, 1893) of the lower extremities. He does not use plaster for femur at all but a Bucks apparatus for extension, and long outside splint to keep leg and foot straight in fracture of shaft of femur. In upper third he used a double inclined plane. In lower third he uses a padded beam splint as an adjuvant to extension In fractures of tibia and fibula he uses plaster. In a Potts fracture a posterior plaster splint.

Dr. Roberts of Philadelphia (*Med. News* July 8, 1893) says there is no question but that the best splints are those moulded to the limb after reduction of the fracture. He makes them of cheese cloth dipped in plaster, or paste, or glue, or uses felt, or gutta percha softened by hot water. Roberts prefers plaster because it sets so quickly. He makes lateral, anterior or posterior splints of any shape and holds them in place with a roller bandage. He stiffens a splint with strips of metal.

I have no objection to this use of plaster. It is cheap and handy, yet I think a splint of binders' board, felt or leather is stronger, lighter and not so apt to break as plaster.

Southam (in Treves Surgery Manual, vol. 2. p. 9) says the advantage of splints is that the seat of injury can be seen, whereas a stiff bandage conceals it; such a bandage must be interrupted or slit up its whole length after it has set so as to allow its removal from time to time.

I have recently treated a simple fracture of the lower third of the right leg in a man about 60 years old who has extensive epithelioma of the face. At the first dressing I used felt and found that it must be moulded to the parts very quickly as it sets very rapidly.

I have found as soon as swelling commences to subside the least bit that broad strips of adhesive plaster applied over the roller keep all the parts more steady than with the roller alone. In case you do not wish to redress your case tighten these adhesive strips by pulling them off and then putting back in same place a little more snugly. A roller yields a little, while adhesive plaster does not.

In this case I kept on the felt ten days. My patient was unruly and whined a great deal, so that I was never certain whether he told the truth about this or that pain. I now felt safe in putting on a hinged plaster dressing that I could readily open.

After three weeks more I applied a crinolin roller rubbed in plaster. This sort is the cleanest, nicest, toughest and lightest of all the kinds of plaster-dressing I know of. The only drawback to it is, that it takes over a day to harden, so that you must support it by temporary splints for that time just as you would a starched roller.

Speaking of patients being unruly you will read in text books that you must demand obedience or else throw up the case.

Now I doubt very much whether a doctor can legally throw up a case because it is troublesome and unruly, unless the patient desires it. It is as much ones duty to govern these cases as it is one of hysteria. One ought, however, to be very frank with his patient, giving warning as to bad results, and should wisely protect himself by having an honorable consultant. To go back to my case:

In six weeks the bones were stiff enough for him to go on crutches allowing the leg to swing. In spite of strenuous direction he bore some weight on his foot. The callus became painful and hot to the touch and I was sent for. He denied everything, but fortunately, his wife knew what he did and gave him away to me.

Elevation of the leg with quiet in bed and a cooling lotion cured him. He is now well and can walk. The epithelioma did not defer the union of the bones.

There are variously modified physiological processes whose sum is inflammation with disturbance of function. In inflammation there is an increased porosity of the vessel walls so that there is a filtration of solids as well as liquids; this exudation is the most essential element of swelling; its origin and fate is the most important feature of the pathology of inflammation (Pepper's System, vol. 1, p. 42, etc.). The degree of inflammation in fractures varies as well as the duration. The theory of an infection does not explain joint affections and such like in simple fractures.

In the following case, there was chronicity of inflammation during the time of delayed union. The man was about thirty-five years old, over six feet tall, was sober and industrious with fair development of muscular system. His feet were deformed somewhat, but no paralysis. The fracture was in the femur, was simple, just above lower third; seemed a square break from a direct blow of minimum force. I did not dream

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of having any trouble with the case. In spite however of faithful attention he suffered with pain and many days or rather nights with spasms of the femoral muscles, loss of sleep, and more or less fever. I used extension with leg on a Volkman's sliding rest and coaptation splints. I increased the weight, but again had to lessen it as he complained so much. I only gave opiates at night, and used the most careful diet.

In twenty-eight days the callus was somewhat firm and I applied a strong crinoline plaster roller, reinforced with strips of tin, from toes to waist. He was comfortable in this dressing and had more liberty in his bed. I kept this on a month. When I took it off, and raised the leg off the bed the broken place would bleed There was a larger ensheathing callus than usual and it was quite painful to the touch and when he moved.

There was but little shortening and the knee was not twisted. I did not reapply plaster. I had a splint made of sole leather reaching from the ankle to the waist and reinforced along outside with a strip of steel fashioning it like unto a Thomas splint used in cases of morbus coxarius.

I wet the leather and strapped it on; when dry it was snug, light, strong and comfortable. It was easily taken off every day so that the limb could be rubbed, as there was edema of the limb, a harsh branny skin and flabby muscles.

I made him wear the splint, though not buckled tightly, for a while at night. We put him on a reclining chair, gave him tonics and in time got him on crutches. The callus slowly grew solid but it was seven or eight months before he could bear his weight on it. A low form of inflammation must have existed in the large callus preventing the usual consolidation. In the outcome of this case I consider myself very lucky. The man was patient and tried to bear up under his misfortune.

Under the strenuous treatment of our fathers, this man would have had bedsores, ulceration of the peri neum, sloughing of the heel and possibly a false joint in his femur.

It is much to the credit of surgeons that we have so many methods of treatment.

In fractures of the arm it is quite difficult to teach the patient to allow the arm to hang passively in the sling; to teach them that every movement of the arm also pries the fragments apart.

In boys and unruly patients at first where the arm is very sore there is not much temptation to movement, but in a week or ten days one ought to put on a stiff bandage if possible.

Last winter, when it was very cold I dressed a fore arm that seemed only cracked as there was no dis placement. The man neglected me though he could walk without pain. I happened to meet him and found the splints loose and the forearm very much bent. He said he had been free from pain and did not think it necessary to visit me. I straightened his arm and in two days as there was no pain or swelling, I applied a hinged plaster dressing. He now did well.

It was simply luck for me to see this case when hurt. I have no doubt he would have thrown all the blame on me if he had got well with a crooked arm.

This case also exemplifies the truth of what Packard (Cy. S. Vol.2, p. 56) says about the comfort felt in a prop erly dressed limb. Comfort is not a sign that a proper dressing has been applied.

Authorities warn us to be prudent in our prognosis, and to positively insist on obedience on the part of the patient; also to truthfully tell what must be expected as to lameness and deformity. I recall three cases where I had crooked legs. One, a boy of fifteen, tall for his age was violently struck on the leg just above the ankle by a hose cart. The fracture was simple. I made two attempts at intervals of a few days to pull and bend the leg right. Both times chloroform was used. But I could not succeed. At the first attempt I had one doctor as an assistent at the second, two assistant doctors. This must have been a toothed fracture. Stimson says (Fractures, p. 157) complete reduction is sometimes impossible and that extreme force must not be used.

In the second case a man of middle age had his arm torn off and a leg broken by a revolving set screw. I got the leg right and could keep it so by snug bandaging but the man would loosen it in my absence. He made solemn promises to continually break them. Could I abandon such a poor devil? He got well but his leg was crooked! He however never seemed to care at all. He was light and spry too.

In a third case there was a compound fracture near the ankle. The foot was suspended by adhesive plaster to the lower end of a fracture box. The man would not lie on his back and so twisted the knee and upper fragment out of line with the feet.

In readjusting him I repeatedly warned him that he would be pigeon toed. He declared that it was impossible for him to lie all the time on his back and he did'nt!

When he got well he growled for months; refused to pay, and made terrible threats of what he would do. As you may well believe this was very disagreeable to bear.

Electric Treatment of Uterine Fibromata.—Bergonie and Boursier give a summary of the results obtained by them in the treatment of 100 cases of uterine fibromata by monopolar positive electrolysis, according to the practice of Apostoli. They conclude:

1. That the treatment of uterine fibroids by this method is principally a palliative—efficacious in hemorrhagic fibroide, 90 per cent.

2. That it acts favorably on the general condition, 79 per cent.

3. That it often diminishes pain, 50 per cent.

4. That as regards the size of the tumors, its action is rarely efficacious, 9 to 10 per cent.—*Brit. Med Journ.*

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EDITORIALS

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Indications for Glycerin Clysmata.

The injection of small quantities—one to four drachms—of glycerin into the rectum is a well known remedy for habitaal constipation due to sedentary habits and inappropriate food. Daily injections, repeated at the same time of the day will gradually bring about a regular action of the bowels, so that later on a daily evacuation will take place without any injection. Glycerin clysmata are only efficacious when the rectum contains feces, when they will bring about a physiological evacuation, *i. e.*, there will be no diarrheal stools produced. After the evacuation of the rectum the contents of the sigmoid flexure and the large bowel are successively evacuated. The injections are ineffective where constipation is due to febrile diseases, to affections of the brain and spinal cord, or to a mechanical obstruction in the intestinal circulation, yet, according to Anacker (*Deut. Med. Woch*) they are not absolutely contraindicated in these latter cases and he recommends them particularly in irreducible hernias as the very first procedure. The same author has also noticed an increased number and intensity of labor pains after glycerin injections, so that they seem particularly indicated as an evacuant of the bowel before or during labor.

A New and Rapid Method of Anesthesia.

William S. Magill, M D., of Chicago, Ill., writes in the *Medical Record*:

As the first American to employ this method, it may be permitted me to invite the attentiou of American surgeons to this subject by this brief notice.

The method was devised and developed, during the summer and fall of 1892, by Dr. Bourbon, anesthesist of Hospital Bichat, Dr. Hartman, acting surgeon, and myself, and, since its introduction, is the preferred method in the surgical service of Professor Terrier, at Hopital Bichat. The modus operandi cannot be better described briefly than is done by Professor Terrier, in his communication of the subject to the Societe de Chirurgie of Paris, October 19, 1892.

"The bromide of ethyl should be given in large doses. After pouring it abundantly (about three grammes) upon a folded towel, it is placed over the nose and mouth of the patient, who is told to breathe deeply. Generally at the second or third inhalation a slight agitation appears, but at the fifth or sixth the anesthesia is complete, with total loss of consciousness. With the continuance of this anesthetic, in a moment, sometimes preceded by tonic contracture, the complete muscular resolution is accomplished, with congested face and dilated pupil. At this moment the towel saturated with ethyl bromide is rejected, and another upon which chloroform is poured, is substituted in its place, without allowing any interruption of anesthesia in changing. The first dose of chloroform only should be fairly strong (one gramme). At this moment the operation may be commenced (about three-quarters to one minute since the commencement of the anesthesia). The facial congestion diminishes little by little, the pupillary dilatation gives place to contraction; in a word, the transition from the anesthesia of the bromide to that of chloroform is accomplished without the slightest interruption of the sleep. From this moment the continuance of the anesthesia is done in the ordinary way (chloroform in small and regular doses). The difference is simply that the complete anesthesia is immediate, instead of resultant of a period often long which is necessary in the process of chloroform anesthesia." [And more so in case of employment of ether]

The matter in brackets is not a part of Professor Terrier's communication, but inserted as explanatory.

It will be seen that the duration of the anesthesia may be prolonged at the will of the operator. Experience has demonstrated that by this process a remarkably small quantity of anesthetic agents suffices for complete and protracted unconsciousness, and that by reason of the smallness of the quantity used, the awakening of the patient almost immediately follows the cessation of administering the chloroform.

I have performed a complete anesthesia for ovariotomy by Professor Terrier, with the administration of three grammes of ethyl bromide and twelve grammes of chloroform, recovery from sleep immediate, and no

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subsequent nausea. Duration of the complete anesthesia thirty-two minutes.

This is only one of many similar cases which will be found in the publication of the clinical studies. How many anesthesists are there who can obtain a complete resolution of a vigorous subject with twelve grammes of chloroform only?

The advantages claimed for this method are:

1. Rapidity, a completed anesthesia, which allow the commencement of the operation in one minute's time after the first inhalation of the anesthetic.

2. Doing away with all violent agitation on the part of the patient, so common when chloroform or ether alone is used.

3. On account of the dissimilar physiologieal action of the two anesthetics employed, the dangers attributed to the use of chloroform alone are in a great measure eliminated by the counter-action of the ethyl bromide previously administered.

4. An almost entire absence of post-operatory nausea.

In February of this year this method was introduced in the service of Dr. Segond, at the Maison de Sante, the City Hospital of Paris, by Dr. Malherbe, and immediately adopted by Dr. Segond for all of his work, to the exclusion of other methods. It was my privilege to introduce this method in the service of Dr. Monod, at Hopital St. Antoine, in April of this year, which led to its adoption as the current method throughout his wards. Dr. Richelot, of Hopital St. Louis, has spoken with considerable favor of this process of anesthesia, in the discussion at the Societe de Chirurgie, and I am informed that in his service he employs it in preference to all others, in cases where affections of the heart cause any apprehension from the use of chloroform alone.

The patients who have been subjected to this method of anesthesia by my colleagues and myself have pronounced in its favor, and in cases of an anesthesia to be repeated for them have asked for this method.

Convinced of its general utility, I would invite its trial in the work of American surgeons, that it may be widely known, experimented with, and thoroughly studied and discussed.

In a short time a monograph on the subject with complete bibliography, chemical and physiological aspects, and several hundred detailed clinical studies of its application, will be published in Paris as a complete history and introduction of the subject. There appears to be no element of danger in the combined employment of these two agents for a complete anesthesia, and the simplicity of its application will be evident on trial.

Intubation.

Pitts in a recent lecture (*Br. Med. Jonrn.*) makes the following observation concerning the relative value of intubation and tracheotomy (*Amer. Journ. of Med. Scien*):

1. The nature of the case.—Cases of a very malignant tyye, particularly those which arise in the course of scarlet fever or measles, are unsuitable for intubation, chiefly from the great tendency of the larynx to become ulcerated by pressure of the tube. In all cases where membrane is very extensive in the mouth, and there is a suspicion of extension below the larynx, early tracheotomy would seem advisable.

2. The surrounding conditions.—Several of the American writers advocate intubation for cases in private, particularly amongst the poor, and when good nursing is not to be had,on the ground that, the intubation tube once introduced, the child is in comparative safety; and if the tube gets blocked with membrane, it will probably be coughed out, and there will be a reasonable interval before dyspnea recurs, sufficient to allow the medical attendant to arrive Unfortunately, as we have seen by Dr. Turner's exprienence, there are exceptions: and we should be unwilling to intubate in private unless a medical man was living in the house competent to deal with any emergency. It is most unsatisfactory to have to do tracheotomy with unsuitable surroundings, but any intelligent person can be given instructions what to do if the tube gets blocked.

3. The age of the patient.—Tracheotomy under two years is so very fatal that intubation would seem to offer the better chance if the larynx only is affected. In the Great Ormond Street cases three of the children were under eighteen months old, and yet two recovered.

4. The previous experience of the surgeon.—It is most important that he should have thought carefully over the whole method of intubation, have previously practised it on the dead snbject, and, better still, have had an extended experience on the living.

5. The consent of the friends.—Consent might be obtained, when permission to perform tracheotomy had been refused, or if permission had not been asked, it would be right to give the perference to intubation.

Dr. Collier's experience has led him to the conclusion that intubation of the larynx is not a suitable procedure when laryngeal diphtheria is accompanied by diphtheria of pharynx, or of naso pharynx, because:

1. The air thus supplied by the lungs, passing over the diseased surfaces, is impure, often foul, and, if not producing diphtheritic bronchitis, may produce broncho-pneumonia of the type of "cut throat lung."

2. The obstruction is often not only laryngeal, but supra laryngeal also.

3. The local treatment of the nose and pharynx is very difficult, owing to choking

4. It is in this class of cases that the feeding of lar yngeal intubation cases is so difficult.

Intubation of the larynx is also contra-indicated when one believes that there is membrane in the trachea.

1. Here apparently easy breathing usually results for a time; but while inspiration is relieved, the membrane acts like a valve over the end of the tube during expiration and in this way extraordinarily rapid acute insufflation of lung is likely to occur. We have seen a

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chest become, in the course of eight hours, extremely barrel shaped, with cardiac dulness quite hidden.

2. The expelling of membrane is extremely difficult, and usually attended by ejection of the tube.

On the other hand, Dr. Collier advises intubation in all cases of primary laryngeal diphtheria unaccompanied by supra laryngeal obstruction, and without evidence of the existence of membrane in the trachea; in all such cases, indeed, as were until recently called "membranous croup."

Diagnosis of Hereditary Syphilis.

Fournier insists that the diagnosis of hereditary syph ilis must be based almost exclusively upon ocular evi dence (*Med. Rec*). Beyond a family history of infantile polymortality, verbal information has but little significance. To Hutchinson's triad of symptoms—notched teeth, interstitial keratitis and inflammation of the middle ear—must be added three other important evidences of specific trouble that do not always re ceive sufficient emphasis. First, the general appearance of the patient; next, the cicatrices upon the skin and mucous membranes; and, third the deformities of the bones. Persistent childhood best describes the bodily condition, owing to the low stature and slight frame. The scars upon the skin and mucous membranes present four definite characteristics: their size, configuration, area and locality. They are very small, almost minute; in form like a rounded bow, an arcade or a serpentine curve. They are arranged in groups joined at the side, and are found at the commissure of the lips, about the circumference of the nose, in the throat, and particularly upon the buttocks and in the lumbar region. In the bony skeleton are the most strongly marked, the most profound and persistent lesions, easily discovered in the skull, in the face, in the bones of the extremities, most notably in the tibia. The forehead bulges ontward, or may be keel shaped, or may present symmetrical protuberances. There is often marked increase in the transverse diameter of the head, aud the lateral halves of the cranium often show marked asymmetry. The characteristic deformity of the face is that of the nose. In the first type the upper part of the nose seems to have fallen in and the tip turned up; in the second, the lower portion of the nose is shortened and appears in some way to be absorbed into the upper part. There are also less typical nasal deformities, as when the nose is flattened at the base or badly formed, the result of simple dystrophy and not of necrosis. Protuberances and hyperostoses are found at the level of the epiphyses, especially noticeable at the upper extremity of the tibia and at the lower extremity of the radius and ulna. But the tibia is the direct revelation of syphilis. Its form alone will reveal this disease. It is large, thick and misshapen, much widened and depressed in its middle portion. The crest is so much increased in size as to present a plane face. In general effect the bone is like the blade of a sword. This conformation is never found in any condition other than hereditary syphilis, of which it is the pathognomonic sign. Chronic lesions of the testicle are of frequent occurrence. This, together with a history of middle ear trouble, interstitial keratitis, notched teeth, small scars upon the skin and mucous membrane, the imperfections of the bony skeleton, the arrest or anomalies of bodily development, and the special condition of the tibia, render the retrospective diagnosis of hereditary syphilis comparatively easy.

Herpes Labialis.—This boy, age about four years, has as you observe at once, a swelling under the jaw and sores about the mouth. The father says the sores about the mouth have been present seven or eight days, and the glandular swellings under the jaw on each side have been present three or four days. There is no eruption anywhere excepting that about the mouth, which extends somewhat down the chin. The scabs or serous exudates are almost transparent, and their appearance is very much like that of eczema, only that in herpes the vesicles are smaller, closer together, and the surface beneath is redder. There is some liquid beneath the scab or dried serum. There is no odor to the breath.

It is probable the boy had a fever from some cause or other; it may be he had only a catarrhal fever, and in consequence developed labial herpes. Very likely there were some herpetic spots in the mouth; but with or without that, the glands under the jaw became infected and swelled. It is generally a very active fever with healthy circulation which throws out herpetic vesicles, and when the old practitioners of the past century saw herpes come out during an acute inflammatory disease they made a good prognosis. And there was considerable reason for it. When, for instance, you meet with a case of pneumonia and the circulation is active, herpetic eruption is very apt to make its appearance. Herpes is decidedly a neurotic affection, and is generally recognized as such in "zoster." But these cases which are not so called zoster proper, are of the same nature. Very probable this boy is over the disease now which caused the herpes; he had presumably a severe "cold" or catarrhal fever.

What would you do for the boy now, when the danger is simply from scratching and keeping the sores irritated and open, and thus also keeping up irritation and a swollen condition of the lymph bodies which finally might result in permanent hypertrophy or so-called "scrofulous glands?" "Apply some soothing ointment, like oxide of zinc, and keeping the boy hands off of it." Yes, keeping the hands off is more important than applying the ointment. To apply the ointment before the scabs have been renewed or have disappeared would be of little value. Remove the scabs with warm water or oil; then apply the ointment and keep the hands off. Do we need do anything for the glands? "I think the swelling will disappear spontaneously." Yes, after the herpes disappears.—A. Jacobi, M.D, in *Arch. of Ped.*

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ABSTRACTS

How to Ascertain a Twin Pregnancy.—It is best done by abdominal palpation and auscultation.

In twin conception, on uncovering the woman's abdomen, one can at once notice the considerable dimensions of the uterus, the irregularity of its shape, a depression, even a sulcus, crossing obliquely the abdominal walls.

This sulcus is always present when the two fetuses are lying obliquely above the other, as generally happens. But it does not exist when the fetuses are one in front of the other.

By abdominal palpation, the diagnosis is easy in the first instance, but difficult in the other instance.

At any rate, palpation at once reveals the great volume of the uterus and its irregular shape. But its tension, on account of a greater amount of amniotic fluid, renders the diagnosis more difficult, as the fetal parts are not so well defined.

By palpation it can be ascertained that in twin pregnancy the large fetal tumors are double; for instance, one head can be found near the superior strait, the other at the fundus of the uterus; and one back, in an oblique and inferior direction.

In other instances, there may be found two breeches, two backs, and only one head in one of the iliac fossæ; the other head, being concealed in the excavation, can be found by the vaginal touch only. This is a very delicate point in obstetric diagnosis.

Auscultation will generally much assist in ascertaining the beat of two hearts at different points.—*Amer. Gyne. Journ.*

Paternal Transmissibility of Tuberculosis.—Dr. John M. Keating, in an excellent paper before the American Pediatric Society in May, 1893, on "Plausibility of the Direct Transmission of Tuberculosis to the Fetus from either Parent," concludes as follows:

1. Unrecognized genital tuberculosis in women without pulmonary disease is not uncommon.

2. A tuberculous mother can transmit the disease to her offspring in utero.

3. Tuberculosis is apparently at times confined to the generative organs of women, probably with greater frequency than we now recognize.

4. Bacilli or their spores can be conveyed by means of seminal secretion to women when no apparent tubercular lesion is present in the male generative organs.

5. Women may, and often do, escape tuberculosis when transmitted in this way, and even when evidence exists of tuberculosis of the male generative organs.

6. Is it not possible for the father to transmit his disease directly to the fetus, the mother not proving a fertile soil, and, if so, is it not possible for this inheritance to become latent in the child, only to manifest itself when accident or environment tends to bring it into activity? And can we not go still further and assert that the bacillus or its spores, inherited from either parent, may be carried into another generation, and either become manifest in glandular affections, joint troubles or even finally in pulmonary disease?—*Times and Reg.*

Burns.—A doctor who had the painful task of dressing some of the wounds caused by the late dreadful fire in the Cold Storage building in the World's Fair grounds, has this to say about the treatment of burns in general:

"Burns are always painful, but the most painful ones are not the most dangerous. A circumscribed deep burn is less dangerous than a superficial burn covering an extensive surface. The rule in burns and scalds is to exclude the air as soon as possible. This is generally more readily accomplished by wrapping the burned part with gauze or cotton soaked in oil. Cloths wrung out of a solution of 'baking soda' or boric acid are said to relieve the pain promptly. A dressing of flour can usually be obtained at once, and answers as a temporary dressing.

"The dressing should be allowed to remain on as long possible. All blisters should be picked and their fluid contents allowed to escape. Burnt fingers should not be allowed to touch each other.

"In the treatment of burns the utmost cleanliness should be observed. Suppuration from burns is no more necessary than from any other wound. They should be dressed antiseptically. This can be easily accomplished by having the oil used, slightly carbolized. Carbolized or iodoform or bichloride gauze should be used.—*Pacific Rec.*

Abstract of a Paper on Urinalysis in Gynecology.—Howard A Kelly, M.D. (*American Medico-Surgical Bulletin*), says: A careful analysis of catheterized specimens of urine should be made before and after all gynecological operations.

Heller's and the heat test are the most practical for the qualitative estimation of albumin, while Fehling's and Nylander's solutions have proven efficient in testing for sugar.

The results of each analysis should be transferred to a special urinary chart, and filed with the patient's history.

In cases subjected to celiotomy, the urine should be examined at least three times: the day before, and three days after operation, and during convalescence, about the twentieth day.

From an analysis of two hundred urinary charts, the following conclusions were drawn:

1. Albuminuria in pelvic inflammatory cases is usually due to cystitis.

2. Secondary changes in the kidneys are due either to absorption of septic products, from pressure on the ureters, or from extension by contiguity.

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3. Albumin is most frequently noted three days after operation, and in the majority of cases disappears during convalescence.

4. Decreased excretion of urine following celiotomy, averaging 516 c. c. the second day, and gradually reaching normal on the tenth.

5. Increased specific gravity, probably due to decrease in watery constituents, while the solids are normal or increased in amount.

6. To concentration of the urine is probably due the vesical irritation so often observed following operations.

7. The increase in the percentage of cases showing albumin, is also due to vesical irritation.

Albumin, was found in 46 (23%) of the 200 cases before operation, and 66 (33%) after operation.

Casts were observed in 10 (5%) cases before and in 30 (15%) after operation.

At time of discharge from the hospital, in only 8% of cases were casts still present. Although there is a definite relation between pelvic and kidney disease, it is seldom that an operation is refused on account of renal changes.

In all cases dying after operation in the Gynecological Department of the Johns Hopkins Hospital during the past two years, not a single death was found at the autopsy to be due to kidney disease.

In conclusion, the practical result of this analysis may be summarized as follows:

1. Pelvic disease does not occasion renal disease of serious nature in a very large percentage of cases.

2. All urinary examinations must be made from catheterized specimens.

3. Presence of albumin, even in a large amount, is not significant unless casts are present

4. The presence of small granular and hyaline casts does not contraindicate operation unless vascular and associated symptoms indicate renal disease.

5. Diminished secretion following operation, as low as 290 c. c. a day, is not unusual and need occasion no alarm as to the possibility of a ureter being ligated or the existence of any serious interference with the renal function.

6. Persistent diminished secretion, associated with elevated temparature and increasing rapidity of pulse, is not due to nephritis, but to septicemia.

Pseudo-Diphtheria Bacillus and the Diagnostic Importance of Loffler's Bacillus —Dr Theodore Escherich, Professor of Diseases of Children, Graz, writes in the *Berl Klin Wochenschr.*:

The Hofman-Loffler Pseudo-Diphtheria Bacillus, Escherich, in his bacteriological investigations, found the Hofman bacillus, and was of the same opinion as other authors as to its differential characteristics in regard to its growth and form.

As a new differential point, however, he mentioned that the Hofman bacilli have a strong tendency to form parallel or convergent rods, while the Loffler bacilli appear in a haphazard way, crossing each other. Lacmus broth, charged with cultures of Hofman bacilli, retains its violet color and changes into blue in a few days, while, in the case of dyphtheria bacilli, a distinct change occurs within forty eight hours. This change remained stationary in Escherich's colonies for weeks and months, and only after a much longer time does any alkaline reaction set in. Rabbits vaccinated with pseudo diphtheria (Hofman's) bacilli bear it without any apparent injury, and are just as susceptible to the true diphtheria infection as animals that have not been inoculated. Although Escherich's experiments were performed in the same manner as those of Hofman he did not come to the same conclusion as Hofman, viz.: that pseudo diphtheria bacilli are very often, and almost constantly, found in the mouth and pharynx. Out of 320 observations, Escherich found them only eleven times, and then mostly in connection with measles.

All the cultures which the author made had constantly their own characteristics, as mentioned before; and therefore, they should be looked upon as a separate kind by themselves, losing by this fact most of the interest which was formerly attached to them by their relation to the diphtheria bacillus, as their occurrence is not constant in diphtheria or any other disease, except in measles.

The inconstant virulence of the Loffler bacillus—It was expected, from the experience with other pathogenic bacteria, that the virulence of diptheria bacilli will also be subject to changes under certain circumstances. Roux and Yersin have found that there is a direct relation between the virulence of the different cultures, and the intensity of the disease caused by them. Cultures made from subsequent vaccination lost much of their virulence; and by the tenth vaccination usually did not prove fatal at all. This fact induced some authors to state that the Hofman bacillus differs from that of Loffler only by lacking pathogenic action. Escherich was of the same opinion, supposing that he was dealing with the Hofman bacillus only, while, during his experiments, he found the Loffler bacillus also, which failed to produce diphtheria,

But subsequent investigations showed him that this question could not be decided upon purely negative results regarding the virulence of the Loffler bacillus, because his negative results were due to omitting to take into account the following conditions, which he wishes (more widely) to mention and emphasize:

1. Reaction: Culture of alkaline bouillon (always the pepton-grape sugar bouillon is meant) proved to have more virulence than those of neutral bouillon; but the latter seemed to retain their virulence for a longer time.

2. Age: Escherich found that the cultures attain their strongest virulence in from one to two days; after five or six days, a considerable quantity of some cultures could be injected without doing any harm; in other instances, cultures retained their virulence after two

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months, and even five months. Others, also, have obtained the same different results. This behavior of the cultures, at different ages, led Escherich to a false conclusion in his former experiments, and as he had generally used old cultures, his results regarding the virulence were very different or negative.

3. Age and respective weight of animals: Younger animals are much more susceptible to, and have less resistance to, the diphtheria-bacillus, and results will differ widely by using smaller animals or larger quantities of culture.

4. The virulence will vary according to the location at which the injection is made. It is the smallest when intra-peritoneal, largest when intra muscular, and intermediate when subcutaneously applied.

To obtain uniform results, Escherich recommends, from his present experience, that experimenters use a certain quantity, in proportion to the weight of the animal,—just enough to produce fatal acute diphtheria,—to use a culture not older than two days, and from a weakly alkaline bouillon medium, and that the injection be a subcutaneous one rather than intra-muscular or intra-peritoneal.—*Diet. and Hyg Gaz.*

The Physiological Action of Oxygen.—In the month of November, 1893 I had in my possession a cylinder of compressed oxygen, in quantity about twenty cubic feet and of 93 per cent guaranteed purity. In a spirit of mere idleness a friend and I tried the effects of large inhalations of the pure gas; but quickly entering in to the spirit of scientific accurancy we altered our method and inhaled for a considerable period an atmosphere of nearly pure oxygen. We were both in perfect health, and our observations, complete in our case, must not necessarily be supposed to be the same as in a state of disease. The results were most surprising to me; my friend had no medical knowledge, and did not know what to expect and had, therefore, no preconceived opinions, and this gives more value to my report, as his experiences were the same as mine. Breathing the oxygen in a confined space, so as to inhale as little natural air as possible, and taking deep inspirations, I found that there was no flushing of the face or feeling of quickened vitality, as was shown by the absence of any exhilaration; there was no quickened pulse rate, and, as far as I could judge, there was not the slightest rise in temperature. These were the negative observations. The only positive result that we could see was a distinct diminution of the frequency of respiration. The intervals between the respiratory acts were greatly increased, and there was a feeling that there was no urgency to repeat it; the *besoin de respirer* was entirely absolished for the time being. As far as I could judge the lengthening of the respiratory intervals balanced the increased supply of oxygen to the lungs, and therefore to the blood, in an automatic manner. I write this account of my experience of the inhalation of oxygen, as my observations were confirmed at the meeting of the British Association at Nottingham. I was much struck with the facts at the time, and I only awaited confirmarory experience to publish my notes.—Dr. J. L. Kerr (Manchester), in *Lancet.*

"Black Tongue"—Dr Massin has recently been studying the condition known as "black tongue," especially in regard to the pathology of the complaint. It consists of a hypertrophy of the piliform epithelium. This epithelial hypertrophy is associated with the presence of a parasite, and the question naturally arises whether the parasite bears any causal relationship to the malady. This is, of course, difficult to decide, as so many forms of microorganisms are constantly present in the mouth. Lancereaux and others have described a form of fungus in connexion with "black tongue," but Fereol, Vidal and Mathieu failed to find it. Dr. Massin found in his case colonies of micrococci arranged in zooglea groups. He states that the organisms stained well with aniline dyes, but no capsule could be detected. He attempted to cultivate the germs, but was not successful; inoculations on animals also yielded negative results. The abnormal production of epithelium was found to start from the center and to spread to the edges symmetrically and at about the same rate. Dr. Massin considers that this regularity of form and spread dose not point to a parasite as being the prime causal factor. A remarkable tendency to hypertrophy of the papillæ of the tongue was also noticed, and although powerful antiseptic agents were applied they seemed to be powerless to arrest the spread of the complaint: corrosive sublimate, salol and boracic acid had no effect. The coloring matter with which the cells became impregnated did not appear to be of the same nature as that secreted by chromogenetic bacteria, but rather resembled that found in the cornea. From all these facts Dr. Massin came to the conclusion that this hypertrophy of the piliform epithelium arose from some trophic alteration and that therefore the affection should be placed amongst the groupe of benign neoplasms, closely allied to papillomata.—*Lancet.*

The Feeding of Infants.—Hauser describes a new method. He first refers to the well-known objections to a wet nurse, and the difficulties in artificial feeding. The author has used, in Henoch's clinic and elsewhere, a preparation introduced by Rieth, in which, after the smaller quantities of fat and sugar in cow's milk have been corrected by the addition of cream and milk-sugar, egg albumen, heated above 130°C., is made to supply the deficiency in albumen. The preparation has the same composition as woman's milk, but would be more correctly named albumose milk. The difference between this and ordinary milk, when subjected to artificial digestion, is obvious. If feeding with cow's milk properly prepared and sterilized dose not suit, the author uses this preparation. Medicinal agents are not employed, and washing out the stomach is rarely necessary. There are two classes of cases (1) those in which cow's milk properly prepared seems to suit, and yet the

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infants do not thrive, and (2) those with dyspepsia, etc. Some sixty infants were treated with this preparation, and the author has now used it for one year and a half. The infants take it well, vomiting ceases even in those in whom others preparations have failed, and the weight increases. It is given in small quantities, and cold in bad cases. The stools becomes healthy and regular, but they may be offensive owing to the sulphur in the albumoses, Failure is rare. This preparation is also useful in acute illnesses, in rackets, and some other disease of children. Infants with whom mother's milk dose not agree take it well. Older infants also thrive on it. Cow's milk may be added to it until pure milk feeding is arrived at.—*Brit. Med. Journ.*

The Skin Lesions of Syphilis.—In the *American Lancet* Dr. Cautrell divides these skin lesions into —1st, erythematous; 2d, papular; 3d, pustular; 4th, tubercular; 5th, gummatous; 6th, bullous

1. The erythematous syphiloderm shows itself between the fifth and seventh week after the appearance of the chancre, and lasts for from one to three months. It may be mistaken for lentigo or freckles, exanthemata, medicinal eruptions, tinea circinata, and tinea versicolor, and the pityriasis maculata et circinata of Duhring. Lentigo occupies the parts exposed to the sun. It is yellowish-brown from the first, and never scaly; the pigment is firm. The reverse of these conditions exists in syphilis. The absence of fever and the darker color of the eruption distinguish this form of syphilis from the eruptive fevers. The medicinal eruptions have some fever and gastric disturbance, with an urticarial or edematous character of the lesions and some itching. In tinea circinata the lesions are not likely to be multiple. In tinea versicolor the lesions are more of a chocolate-brown, and not of so extensive a distribution. In pityriasis maculata et circinata the lesions are found in rings and maculæ of all size.

2. The papular syphiloderm is a small, hard, round, and raised lesion, of a raw ham color. It is likely to be at one time or another small or large, scaly or moist, or vegetating. Eczema may be distinguished from the moist variety by there being no lymphatic enlargement, sore throat, or falling off of the hair. Psoriasis is scaly from the first. Look for signs of the initial lesion; do not ask the patient. Lichen planus congregates or localizes itself, and is itchy, which syphilis is not.

3. The pustular syphiloderm may develop from one of the other forms, or occur with them, and may be either pointed or flat, whether of the small or the large variety. Pustular eczema, which is likely to resemble this form of the syphiloderm, gives a history of decided crusting at all times, itching, and no bad odor. In syphilis there is decided ulceration, a bad odor, with crusts stratified, and always polymorphism. Syphilodermata, as a rule, are not limited to those regions affected by acne, as the face, chest, and back.

4. The tubercular syphiloderm shows lesions that vary from the size of a split pea to that of a hazel nut; they are smooth, glistening, round, or pointed, of an intense copper color, and may grow singly or grouped, sometimes in circles or crescents, the so-called serpiginous or snake like character; soon ulcerate and crust; are indolent, and appear late in the disease, the latter part of the second year; are often delayed as long as twenty or twenty five years. In this variety other lesions are not found. Lupus vulgaris, which is likely to resemble this variety, lacks the history of contamination, does not begin late in life, does not ulcerate with punched out appearance, and does not progress rapidly. Epithelioma, which resembles the ulcerating form, has one point of ulceration; is slow in forming; secretion scant, bloody, and viscid; some infiltration; lancinating pains; ulceration most marked in centre.

5. The gummatous syphiloderm consists in a gummy deposit in the skin. At first freely movable under the finger. Its progress is slow; when the skin becomes affected it is not movable; found mainly on scalp and forehead; almost always ends in ulceration; should not be incised. It may be distinguished from furuncle and abscess by its slow, painless progress.

6. The bullous syphiloderm is a late lesion, and seldom seen. Pemphigus and dermatitis herpetiformis, which are likely to resemble it, present lesions containing serum and not pus, and the crusts do not show the horny or rupial characted of syphilis.

Infection.—The period of infectiousness of contagious diseases, according to the State Health Board of Pennsylvania, is:

Small pox—Six weeks from the commencement of the disease, if every scab has fallen off.

Chicken-pox—Three weeks from the commencement of the disease, if every scab has fallen off.

Scarlet Fever—Six weeks from the commencement of the disease, if the peeling has ceased and there is no sore nose.

Diphtheria—Six weeks from the commencement of the disease, if sore throat and other signs of the disease have disappeared.

Measles—Three weeks from the commencement of the disease, if all rash and the cought has ceased.

Mumps—Three weeks from the commencement of the disease, if all swelling has subsided.

Typhus—Four weeks from the commencement of the disease, if strength is re established.

Typhoid—Six weeks from the commencement of the disease, if strength is re-established.

Whooping Cough—Six weeks from the commencement of the disease, if all cough has ceased.

Under judicions treatment the period of infectiousness may be considerably shortened, but no child suffering as above should be admitted to any school after a shorter period of absence, and then should be provided with a medical certificate, that he or she is not liable to communicate the disease.

Length of Quarantine.— Teachers or children who

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have been exposed to infection from any of the following diseases may safely be re admitted to the school, if they remain in good health (and have taken proper means for disinfection) after the following periods of quarantine:

Diphtheria, 12 days; scarlet fever, 14 days; small-pox 18 days; mumps, 24 days; whooping cough, 21 days.

Adults may be re-admitted immediately, if they disinfect their clothes and persons.—*Maryland Med. Journ.*

Treatment of Chorea.—In a recent lecture, delivered at Charing Cross Hospital, Dr. John Abercrombie makes the following suggestions concerning the treatment of chorea in children:

Unless the attack is very mild absolute rest of mind and body is essential. Lessons must be given up and the child kept at home lying down. Most severe attacks demand complete rest in bed with padded sides. In very severe cases the child should be swung as in a hammock. Only in the lightest attacks should the patient feed himself. When mastication is difficult, minced-meat, strong beef-tea, milk puddings, milk, and cocoa should form the chief articles of diet. Sleep is of great importance. If necessary, chloral, morphine, bromides, may administered. Iron and arsenic are the best drugs, though drug treatment is of less importance than gener al managememt. Rheumatic manifestations or heart complications should be treated on general principles. In chronic cases douches to the spine, shampooing, mas sage, and gymnastics are of value.—*Med. Rec.*

Spinal Paralysis of Syphilitic Origin.—This affection is described by Erb under the title of syphilitic spinal paralysis, and by Charcot as syphilitic transverse myelitis. Kowalewsky has recently reviewed its clinical features and differential diagnosis. It is of slow development, occurring chiefly in men between the ages of thirty and forty five, and bladder disturbance is one of the first symptoms. Many of the conditions present resemble those of spastic paraplegia. But spasticity of gait, when it exists, is not so marked as in lateral sclerosis. Muscular rigidity and increase of deep reflexes are less marked than in spastic paraplegia. There is always increase of muscular irritability, exaggeration of response to heat and cold, and tactile and analgesic response are normal or shortened. An opposite effect is produced in locomotor ataxia.—*Med. Rec.*

Therapeutic Effects of Direct Electrization of the Stomach.—Max Einhorn concludes a study of this subject:

1. Direct faradization. Here detailes of some 28 cases are given, including hyperacidity with dilatation, gastroxynsis, chronic gastric catarrh, anadenia, obstinate gastralgia, etc. The chemistry of digestion was always investigated. In all cases with a single exception, there was a diminution, or rather disappearance of the sympaoms under this treatment, but in 5 other cases of obstinate gastralgia the improvement was so small that galvanism was tried. The faradic current used was only strong enough to produced contraction of the abdominal muscles, and the sitting lasted 10 minutes.

2. Direct galvanization. Here 7 cases are recorded. The cases of obstinate gastralgia referred to above were much benefited. The author concludes that direct gastro-faradization is useful in most chronic diseases of the stomach, except cancer; that its effects is very evident and comparatively rapid in non-obstructive gastric dilatation, and also in cases of relaxation of the cardia or pylorus, and that direct galvanization gives good results in obstinate gastralgia rebellious to others treatment.—*Br. Med. Journ.*

The New Hypnotic Chloralate.—Basset reports the results of his observations on this hypnotic. Sleeps follows rapidly on its administration, and is light When the patient wakes there is not that heaviness which is left by the preparations of chloral, nor is there constipation as after opium, or diminution of appetite. It is administered in the form of tabloids, the initial dose being 0.20 g at night, and increased to 0.30 and 0.40 g. if the first dose has been insufficient and has not caused vertigo or tremors. It should be given very guardedly in organic disease, and appears to be contra indicated in locomotor ataxy. Its action continues for several nights in succession, the sleep on the successive nights being better than before it was taken, but not so good as on the night it was taken. Basset belives that it also possesses an analgesic action. *Br. Med. Journ.*

The Tongue in Influenza.—Faisans recently made an interesting communication to the Societe Medicale des Hopitaux, concerning the tongue in grip. Its special characteristic is an opaline tint of bluish white, sometimes uniformly distributed and again appearing in patches. This porcelain appearance of the tongue is often the first definite sign of grip, and accompanies the vague malaise that precedes the disease. It always appears during the first two or three days. As long as the condition is present, the patient is by no means well, though recovery may be apparent. Complications may arise as long as the opaline tint remains. The tongue is not altered in form or dimensions, nor is it ever dry unless some phlegmonous inflammation is imminent or has already begun. If there is a catarrh of the digestive tract, and the tongue becomes heavily coated, the opaline tint is still visible about the borders, and may show through the coating in places. Cathartics may help clear up the furred tongue, but its characteristic porcelain effect remains. In pneumonia complicating grip, the tongue dries up without effect upon the opaline tint upon its borders. In a case of supposed meningitis in a child, the peculiar appearance of the tougue served to establish the diagnosis of grip, a diagnosis verified by subsequent event. Sometimes there is lingual desquamation, as in scarlet fever.—*Med. Rec.*

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CORRESPONDENCE

Acute Dyspepsia.

Editor MEDICAL REVIEW —Referring to the case reported by Dr. Brink, I question the accuracy of the diagnosis. The very inefficiency of the great variety of treatments employed would seem to be proof positive that the case is not one of acute indigestion. The doctor casually states that parturition promptly relieved a severe dysmenorrhea, and, in the light of recent developments, this is suggestive of the real trouble. If Dr. Brink will carefully investigate he will undoubtedly find *all the sphincters* rigid and contracted, and the rectum full of hemorrhoidal and other morbid manifestations. I question whether the innocent salmon had anything more than a casual and secondary relation to the acute onset of the disease. If the doctor will carefully explore the rectum, the vagina and os uteri, first thoroughly stretching the sphincter ani to the extent of temporarily paralyzing it, or even rupturing some of its tensest fibers, either under an anesthetic, or by the aid of cocaine injected deeply into the muscle, in four or six equi distant points (one cutaneous opening being sufficient for the whole), he will find the "pile bearing inch" badly in need of attention, with redundant papillæ, pouches and "pockets," which he should remove, and thus practically "smooth up" the passage. This alone will in all probability work wonders for his patient; but he must go further and look to the condition of the urethra and the clitoris. See that the hood of the latter is free, and that it does not cover the glans and cause the retention of smegma and other secretions, which often cause reflex disturbances of the most serious nature, the real origin of which is seldom suspected. If the hood is redundant and confines the clitoris, thoroughly free it by slitting it up as may be required to accomplish the object aimed at. The urethra may be the seat of an irritable caruncle of which the patient has never complained but which has been adding to the general trouble. It may be very small and yet of very serious import. Snip it off and check the hemorrhage by a touch of fuming nitric acid, applied by means of a small wooden probe, or a small, smooth pointed glass rod. Stretch the urethra, if it seems contracted, and the healing process may be expedited by retaining within it a medium size, pure gum catheter, made strictly aseptic. By an expert surgeon all this can be accomplished at a sitting; but in hesitant hands it had better be divided into two operations, with several weeks intervening between them. Later on, it may be necessary to look to the uterine sphincters, thoroughly dilating them, if there is any indication of recurring dysmenorrhea.

From recent experiences of my own it is evident to me that the work has been done at the wrong end of this patient. Give her poor stomach a rest.

New York. SAMUEL S. WALLIAN, M.D.

Two Cases in Obstetrics.

Editor MEDICAL REVIEW.—I desire to report two cases of unusual interest in obstetrics both as to combined weight of the two babies and as to unfortunate consequences to mother and child in each case

On a recent date I was called to go seventeen miles to see a woman who had been in confinement for four days. She had, as so often happens in the country, employed an old woman who claimed the knowledge of a midwife, which wisdom consisted in a supreme faith in nature carrying everything to a happy end and giving the credit to her. But nature failed to come to her relief this time. The patient had had severe pains during nearly all that time, as a result of which I found her very much exhausted. I soon found that the child was dead and that it was a very large one.

I concluded I would have to take out the brain and at once operated for craniotomy.

On taking out the brain and compressing the skull the rest of the body was expelled at once, and within ten minutes the life of the mother paid the debt of greed and ignorance.

It is hardly a question had they employed a physician on the first day the mother's life would have been saved, but not the child as it weighed just twenty pounds.

The other case occurred in the practice of a physician of good standing and a graduate of medicine. The outcome of the case was surely no honor to the doctor or doctors implicated. The patient was very fleshy, and a primipara. There were two doctors called, No. 1 (Eclectic) being the first. He did nothing but wait and on the second day No. 2 was called; this suited Eclectic to perfection for he was only too glad to step out of the case which he did.

It did not take the physician called last long to find out that he had a bad case on his hands and that the child could not be born without the operation of craniotomy. In this case the child was alive. On opening the skull the child came as far as the shoulders but would move no further, so he cut the upper part of the body away and the hips presented, but he could make no progress; therefore instead of continuing his cutting, he made the mistake of his life by pulling the remaining parts of the infant from the womb by mere force.

The results were disastrous. Inversion of the womb and complete rupture of the perineum resulted, the rectum being split for several inches. The child was a monster as it weighed twenty-one and a half pounds. In two weeks the doctor took his patient to Kansas City, where she was operated upon, but owing to the weakened condition of her system the operation was a failure and they were compelled to sew up the vulva and anus and make a false anus, using a tube for the passage of urine. Even the last operation failed, as she now has a larger cavity caused by sloughing of the perineum and part of the rectum, fortunately for the poor woman, she is of a happy disposition and life is yet a luxury to her.

J. D. KELLY, M.D.

Plainville, Kan.

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NOTES AND ITEMS

Dr. W. B. Dorsett has resigned his chair at the College of Physicians and Surgeons and accepted the Chair of Obstetrics at the Beaumont Hospital Medical College.

The Red Cross to the Front.—Miss Clara Barton, President of the American National Red Cross, has officially accepted and assumed control of the relief of the sea island sufferers, tendered recently by the Governor and committees of South Carolina. This implies the housing, feeding, clothing, and nursing of thirty thousand people for eight months, with no aid from the Government and no fund but the direct charity of the American people. Her headquarters and address are at Beaufort, S. C.

Prevention of Cocaine Intoxication.—Dr. Parker (*Bril. Med. Jour.*) has discovered that the unpleasant, and even poisonous, symptoms that occasionally follow the local application of strong solutions of cocaine in the nasal and buccal cavities may be entirely prevented by combining the drug with resorcin. This combination has the further advantage of adding the antiseptic, astringent, and hemostatic properties of the latter drug to the effects of cocaine.

Keeley Withdraws His Libel-Suits.—The libel-suits instituted by Keeley against the *Medical Press and Circular* and the *Lancet* have been voluntarily withdrawn, the costs of the respective proceedings being paid by the plaintiff (*Med News*). The reason given by the solicitor was that the demands upon the plaintiff's time and attention are so great that he finds it impossible to go to England. The courage of the two English newspapers is a lesson to American publishers and editors. The mere whisper of the word libel is often enough to make them run to hole as if no principle were at stake, and as if the whole medical profession were of less value than a nostrum vender's profits.

The Public Recognition of Medical Eminence in France.—In a memorial notice on Jean-Martin Charcot, published in the *Johns Hopkins Bulletin* for September, Professor Osler delicately alludes to the high public status of the physician in France as contrasted with other countries. He says: A finely tempered individualism, prone though it be to excesses, is one of the glories of the French character. The man in France stands for more than in any other land; his worth and work are there more truly recognized, and there his relative position in the history of art, literature, or science is more justly gauged. Alone among the nations of the world, France honors duly the mighty dead of our profession. Not in the Pantheon only, but in statues, in the names of streets, and in the names of hospitals, one is constantly reminded in Paris that such men as Bichat, Pinel, Trousseau, Broca, Bernard, and others have honorably served their day and generation. The menory of Charcot is secure in such a land, and with us, too, it will rest safely, cherished beside that of Leannec and Trousseau.

Double Empyema.—Cassel (*Deut. Med. Woch.*) reports a case in a wasted child, aged four months, who was thought to have had an attack of influenza On the left side there was well marked bronchial breathing at the angle of the scapula behind, and from this point downwards on both sides the percussion note was impaired and the breath sounds ill-defined. In front there are no abnormal signs, and the apex beat was not displaced. The chest was opened on both sides in the sixth interspace, ¼ litre of pus being let out on the right, ½ litre on the left side. The immediate result was good. The improvement was not maintained, so that resection of rib was practiced. The child died later. Pleuritic adhesions were found everywhere except at the sites of the empyemata. A vomica was found in the left lung communicating with the pleural cavity. Many tuberculous foci were found scattered through the lungs. Double sided pleurisy is not so very rare. The only treatment that could be practiced here was opening the chest. Tuberculosis of the lungs may, however, be a contra-indication. At this age the recognition of a tuberculous lesion in the lungs would necessarily be very difficulty.

Large Dose of Digitalis in Croupous Pneumonia —Mario Bellotti (*Gaz. degli Ospitali*) treats of the virtues of digitalis in croupous pneumonia, the present paper being a continuation of a similar one published a year ago. His conclusions from a large number of observations on cases in which Fraenkel's diplococcus has been detected are as follows:

1. All cases of fibrinous pneumonia, due to Fraenkel's bacillus, receive very great benefit from large doses of infusion of digitalis, always accompanied by milk diet, and occasionally by bleeding.

2. It is necessary to give the digitalis in very large doses, because in pneumonic conditions, both the gastric catarrh which is usually present, and the dimunition of HCl of the gastric juice reduce greatly the amount of the drug which actually passes into the portal circulation.

3. Some of the active principles of digitalis seem to exercise a special elective action on the pneumonia toxins, this action taking place chiefly in the liver.—*Med. and Surg. Rep.*

International Congress of Public Health.—Resolutions Adopted.—At the meeting of the International Congress of Public Health, held under the auspices of the American Public Health Association and the World's Congress Auxiliary of the World's

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Columbian Exposition, at Chicago, October 10-14, 1893, the following resolutions were adopted:

(OFFERED BY DR J. E. MONJARAS, OF MEXICO).

Resolved, 1st, That the educational authorities of the various nations represented here be requested to devote a longer time than they now do, in their curriculum, to the teaching of hygiene.

2d, That the governments of the countries represented at this Congress be urged to appoint to sanitary positions and commissions only such persons as may have a special education in sanitary studies.

(OFFERED BY DR. BENJAMIN LEE, OF PENNSYENANIA).

Resolved, That the International Congress of Public Health affirms in the strongest possible manner its confidence in the value of vaccination as a preventive of small pox.

(OFFERED BY MR. HENRY LOMB, OF ROCHESTER, N. Y)

Resolved, 1st, That this Congress urge upon the people of the countries here represented, the importance of completing our sanitary organization by forming voluntary Public Health Associations, to study for themselves the conditions of healthy living in the home and the community and to afford efficient and persistent support to the work of public health officials.

2d, That this Congress respectfully ask State and local boards of health to assist in all proper ways the formations of such organizations.

IRVING A. WATSON, Secretary.

Concord, N. H., October 25, 1893.

The Modern Treatment of Sea-Sickness.—A correspondent of the *British Medical Journal*, who has recently crossed the Atlantic says: "A formula which has been much recommended by Dr. Charteris, of Glasgow, and which has well stood the test of Atlantic Ocean experience, is based on the combination of 20 gm. each of chloralamide and bromide of potassium; both of them individually useful, but which seem to act better in combination, and may be flavored with licorice or tincture of orange peel. A 'specialty' has been made of this under a 'registered' trade title, I know not by whose authority or for whose benefit. A very effectual and pleasant form in which to administer this compound is as follows:

℞ Tinct. aurantii recentis, - - ʒ iv.
Chloralamide, - - - - - ʒ ij.
Pot. bromidi, - - - - - ʒ ij.
Aquæ chloroform., - - - - ʒ ij.
Aquæ dest., ad - - - - - ʒ viij.

M. Dose, ½ part.

Choralamide is incompatible with alkalies, and is soluble in about 1 in 20 of water. This combination is particularly valuable in the frequent cases of sea-sickness, with insomnia; it does not interfere with the digestion or temperature. Dr. Johnson, of the Cunard steamship Aurania, tells me that he has tried it extensively, and with excellent results. Where there is much pain as well as irritability, the sipping of ice-water is often very soothing; and it is here that cocaine tablets of $^1/_{20}$ or $^1/_{10}$ of a grain find their appropriate sphere of usefulness They are usually prepared with chocolate, quickly eaten, and swallowed at intervals of half an hour or an hour. Where there is pallor, faintness, and more or less tendency to 'collapse,' as in some severe cases, very great relief may be found from the use of nitroglycerine tablets.- The tablets have the nitroglycerine in solution in chocolate in a perfectly safe, stable, portable, and palatable form. Tablets of $^1/_{200}$ of a grain are a sufficient dose to ward off sea-sickness. The small bulk, precise dose, and quick action, if well munched and swallowed, render this mode preferabie for administering nitroglyoerine.—*Med. Record.*

Hard Times and Free Medicine.—From every part of this great and rich country the news comes to us of the extreme stringency in the financial position of our confreres, the general practitioners (*Med. and Surg. Rep.*). Never was there a richer opportunity for the masses to play the pauper than now. The present panicky state of the money market affords people an immense excuse for wholesale imposition on the profession. The conditions of the times will not give them free bread, free cloths, free transportation on the railroads, or rent free, but they hie away to many of our too numerous hospitals and dispensaries for free treatment—advice, medicine, and all included for nothing, or for "ten cents," the figure fixed in certain palatial infirmaries.

The consequence of all this has been most demoralizing to the profession and the public. Practitioners reduced to a state of enforced idleness and grim want are forced either to quit their profession altogether, or to "meet steal with steel," to open rival dispensaries, to advertise, or to drift into downright quackery.

Many cases have come to our knowledge which go to prove that the practice in vogue in many of our largest dispensaries is a species of downright robbery, and tends to work incalculable harm to the profession. Case after case is taken from among people of ample means and turned over to the hospital or to the college professor for his clinic, without a word being asked as to their mendicity or ability to pay anything at all. Cheap railroad excursion rates drain the outlying villages for miles in every direction.

This hydra-headed monster of indiscriminate free treatment must be seized and strangled, or we will soon see the profesfion of medicine dragged in the dust; open downright quackery will be rampant, and integity and honor in the healing art will be things of the past

By no means let us withhold our services to the poor and deserving, for humanity compels us to gratuitously attend those without means. Nor let us strip the field of such clinical material as legitimately belongs to the teacher, but let the teacher not forget that he has no proscriptive right to filch from the struggling practitioner what justly belongs to him.

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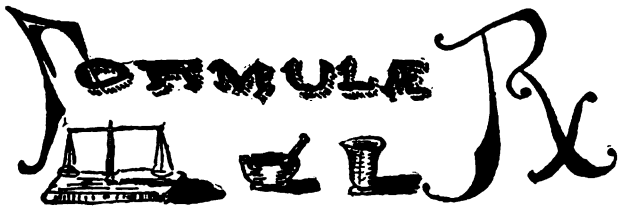

Rheumatic Gout.

℞ Pilul. arthrosia (Warner).
Sig. One or two pills three times a day.

℞ Henry's Tri-iodides.
Sig. Teaspoonful three or more times a day.

Obesity.

℞ Phytoline (Walker), - - - - - - - f ℥j.
Tinct. digitalis, - - - - - - - ♏j.
Fl. ext. fuscus vesiculosus, - - - - - f ℥j.
M.
Sig. Twenty drops before and after the three daily meals.

Aphthae.

℞ Katharmon,
Aquæ rosæ, - - - - - - - - aa f ℥j.
M.
Sig. Apply several times daily.

Pruritus Ani and Vulvæ.

℞ Sodii hyposulphis, - - - - - - - ℥j.
Acid. carbolic, - - - - - - - ℥ss.
Glycerinæ, - - - - - - - - ℥j.
Listerinæ, - - - - - - - - ℥iij.
M.
Sig. Apply externally as directed.

Dyspepsia.

℞ Glycozone, - - - - - - - - f ℥j.
Tinct. gentian. comp., - - - - - f ℥j.
Liq. pepsin, - - - - - - - - f ℥iij.
M.
Sig. Teaspoonful after each meal.

Uric Acid Diathesis.

℞ Piperazine, - - - - - - - - ♏j
Lithiated Hydrangea (Lambert), - - f ℥iv.
M.
Sig. Teaspoonful four times a day.

Typhoid Fever.

℞ Antikamnia, - - - - - - - - ℥j.
Sennine, - - - - - - - - ℥ss.
Sacchar. alb., - - - - - - - - ℥j.
M. F. pulv. Divide in dos. No. 12.
Sig. One powder three times daily.

℞ Rudisch's Beef Peptone,
Sherry wine, - - - - - - - aa f ℥iij.
M.
Sig. Tablespoonful three or more times a day.

Scrofulous Ophthalmia.

℞ Hydrarg. oxyd. flav., - - - - - - gr.v.
Sennine, - - - - - - - - gr.x.
Vaseline,
Lanoline, - - - - - - - aa ℥ij.
M. F. ungt.
Sig. Apply to the everted eyelids.

℞ Phillip's Cod Liver Oil Emulsion.
Sig. Tablespoonful three times a day.

Indigestion.

℞ Pepsin (Fairchild), - - - - - - - ℥j.
Wheeler's Tissue Phosphites, - - - - f ℥ij.
M.
Sig. Tablespoonful after each meal.

Scrotula.

℞ Scott's Emulsion.
Sig. Teaspoonful three times a day.

Heart-Stimulant.

℞ Tinct. digitalis, - - - - - - - f ℥j.
Vin Mariani, - - - - - - - - f ℥xij.
M.
Sig. Tablespoonful three times a day.

Pre-Senility.

℞ Elixir Nutrans (A., W. & Co.),
Metcalf's Coca Wine, - - - - - aa f ℥ij.
M.
Sig. Dessertspoonful three or four times a day.

Congestion and Prolapse of Uterus.

℞ Dioviburnia, - - - - - - - - f ℥iij.
Neurosine, - - - - - - - - - f ℥j.
Syrup. simpl., - - - - - - - - f ℥ij.
M.
Sig. Tablespoonful three or four times a day.

Rheumatism.

℞ Elixir Salicylic Acid Comp. (Warner), - - f ℥ij.
Salicylate of lithium, - - - - - - - ℥j.
M.
Sig. Teaspoonful three times a day.

Asthma.

℞ Neurosine, - - - - - - - - - f ℥j.
Chloral hydrat., - - - - - - - - ℥ij.
Aq. destillat., - - - - - - - - f ℥ij.
Syrup. aurant., - - - - - - - - f ℥iij.
M.
Sig. Tablespoonful every two hours till relieved.

Nasal Catarrh.

℞ Acid tannic, - - - - - - - - ♏j.
Sennine, - - - - - - - - - ℥j.
Glycerin, - - - - - - - - - f ℥j.
Aq. rosæ, - - - - - - - - - f ℥v.
M.
Sig. Use as a spray.

Sore Nipples.

℞ Acid tannic, - - - - - - - - ℥ij.
Sennine, - - - - - - - - - ♏j.
Glycerine,
Aq. rosæ, - - - - - - - - aa f ℥ss.
M.
Sig. Apply externally.

Convulsions of Teething.

℞ Chloral hydrat., - - - - - - - gr.xv.
Neurosine, - - - - - - - - f ℥ij.
Syrup. simpl., - - - - - - - - f ℥ij.
Aq. destillat., - - - - - - - - f ℥ss.
M.
Sig. Teaspoonful every three hours.

Sleeplessness.

℞ Chloral hydrat., - - - - - - - ℥j.
Neurosine, - - - - - - - - f ℥iv.
Sulphate of codeine, - - - - - - gr.j.
Syrup. simpl., - - - - - - - - f ℥iv.
M.
Sig. One to two tablespoonfuls.

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Leucorrhea.

℞ Dioviburnia, - - - - - - - - f ℥viij.
Sig. Dessertspoonful three times a day, and Helonia Tablets inserted into the vagina each night followed by a warm douche consisting of ℥j of Sennine to one quart of water.

Tuberculosis.

℞ Guaiacol, - - - - - - - - - - drops v.
Spirit frumenti, - - - - - - - - f ℥j.
Syrup Hypophos. Comp. (Fellow's), - - f ℥v.
M.
Sig. Tablespoonful three times a day.

℞ Freligh's Tablets.
Sig. One to five tablets, when cough is troublesome.

℞ Creasote, - - - - - - - - - drops v.
Cod-Liver Glycerine, - - - - - - f ℥vj.
M.
Sig. Tablespoonful three times a day.

℞ Baker's Emulsion.
Sig. Teaspoonful four times a day.

Neuralgia.

℞ Andunea, - - - - - - - - - - ℥j.
Neurosine, "
Aq. menth. pip., - - - - - - - aa f ℥ss.
Syruy. simpl., - - - - - - - - f ℥j.
M.
Sig. Teaspoonful every two hours till relieved.

℞ Compound Mixture of Guaiac (Gri&th & Co.)

℞ Restorative Wine of Coca, - - - - - f ℥vj.
Fl. extr. cascar. sagrada, - - - - - - f ℥j.
M.
Sig. Tablespoonful three times a day.

℞ Febricide Pills.
Sig. Two pills every three hours as required.

℞ Pilul. Phenacetine (Bayer), - - - - - gr. ij.
Sig. Two pills three times a day.

Deviation des Regles. (Disordered Menstruation).

℞ Dioviburnia, - - - - - - - - f ℥vj.
Sig. Dessertspoonful three times a day.

Nervousness.

℞ Robinson's Elixir Paraldehyd.
Sig. Half a tablespoonful, repeated if necessary.

Chancroid.

℞ Sennine,
Subnitrate of bismuth, - - - - - aa ℥ss.
M.
Sig. Dust on sore and cover with dry lint.

Pernicious Anemia.

℞ Elixir Six Iodides (Walker-Green's).
Sig. Teaspoonful three or more times a day.

Malaria Fever.

℞ Sulphate of quinine.
Salo Sedates, - - - - - - - - aa ℥j.
M. F. pulv. Divide in dos. No. 12.
Sig. Three to four powders a day.

Tonsilitis.

℞ Phenosalyl, - - - - - - - - - ℥ij.
Aq. destillat, - - - - - - - - ℥vj.
M.
Sig. Use as a gargle.

Spermatorrhea.—Self-Abuse, Sexual Neurasthenia, Etc.—The results of this class of cases, annoying alike to the physician and patient, are well expressed by a physician eminent in his work, who says: "Your Neurosine has given me at least satisfactory results which will warrant me in a further use of it."

Dysmenorrhea, Leucorrhea.—C. A. Bruegmann, M.D., of Hartwell, Kearney Co., Neb., says: "Dioviburnia ranks among the first-class preparations as A1. A young lady, 19 years of age, had been troubled five years with dysmenorrhea and since the last three or four months with complicated leucorrhea. I advised her to use Dioviburnia according to direction, and after having passed two of her periods in 'good shape' (as she reported), she pronounced herself to be perfectly cured."

S. C. Martin, M.D., of St. Louis, Professor of Dermatology and Hygiene, Barnes Medical College, writes as follows to the Katharmon Chemical Co.: "It affords me pleasure to report favorable results from the use of 'Hagee's Cordial of Cod Liver Oil' in a case of faulty nutrition with a tendency to phthisis pulmonalis. The patient had been under my treatment for several weeks without showing any marked improvement, when I decided to test the merits of the above preparation, believing Cod Liver Oil in this form was indicated. The improvement from its use was so sudden and substantial that in ten days the patient returned to his usual occupation, rendering further treatment unnecessary."

A Physician's Experience with Phytoline on Himself.—Geo. H. Hodges, M.D., Urbana, Ohio, writes as follows to the Walker Pharmacal Co., St. Louis, Mo.:

"The Phytoline ordered, came in due time, and I began taking at once. I must say it has done wonders for me. Before commencing the treatment I took my weight carefully and found I weighed 245 pounds. I was feeling badly, was too fat, and extremely uncomfortable. After fourteen days' treatment I weighed and found I had lost nineteen pounds. I feel splendid, can walk rapidly, and not get tired or cause hurried respiration. I feel good, am well pleased with it, and shall continue to prescribe it in my practice. I trust all persons suffering with obesity will take Phytoline.

"I have prescribed Phytoline for five weeks now, and during that time all reports from its use have been favorable."

Sennine in Typhoid Fever.—The intestinal lesions in the vicinity of the various glands involved in typhoid fever afford a very free access to destructive germs and create a fertile soil in which they rapidly multiply. Arterial sedatives and studied alimentation can be of little service so long as they are permitted to continue their ravages. Of course it is not claimed that any antiseptic can reach these spots so as to act topically, and yet in the usual sordid and non-absorbing condition of the mucous tract this is even possible. but Sennine being both safe and efficient as an internal remedy can be given in doses of one to five grains alone or in combination with the various antipyretics used. Boracic acid forming a constituent of Sennine we quote from a very recent Synopsis of French Therapeutics in the *American Therapist*, the following: "There seems to be a tendency to use more and more boracic acid internally. Fortchinskey has tried it in 240 cases of typhoid fever during an epidemic and reports 231 cases of success, ten to fifteen grains were given and in the first three to five days the fever and diarrhea diminished, tympanitis almost disappeared, and the stools became normal in character."

In all zymotic or fermentative diseases Sennine has proved thus far flatteringly successful. In diphtheria, applied locally, and given internally with or without the bichloride it has been of valuable service.

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Regular Weekly Issue, 10,000 Average Monthly for the Year, 43,333

MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XXVIII. ST. LOUIS, DECEMBER 2, 1893. NO. 23.

ORIGINAL ARTICLES.

Operative Procedures for Carcinomatous Tumors of the Breast.

BY J. M'FADDEN GASTON, M D.,

Professor of Principles and Practice of Surgery, Southern Medical College, Atlanta, Ga.

Read before the Southern Surgical and Gynecological Association at New Orleans, November 15, 1893.

The high estimate placed upon the preservation of the mammary gland is attested by the commendable pride of every fair maiden in the development of this part of her organism and by the practical concern of every mother in the due performance of the function of lactation.

Not only from an esthetic standpoint but from utilitarian considerations, the mammary gland is recognized as entitled to a prominent place in the physical structure of woman, and anything which tends to induce diseases of this organ appeals strongly to the physician and surgeon for relief. It becomes us, therefore, to use all diligence in the prophylactic and curative appliances directed to it.

While the mammary gland is liable to injuries of various kinds and to inflammation in connection with its functions, there is a special proclivity to disorders of a graver character, characterized by developments of a malignant kind in its structures.

The mammary gland is peculiarly constituted in the human female and its anatomical relations to the lymphatics render it more liable to complications with the neighboring ganglia, under inflammatory processes, than occurs in any other part of the organism. There are physiological sympathies of this gland with other viscera which indicate a deep seated and intimate correlation between them, but we are interested now especially in the investigation of the link which binds this structure to the general physical system. The involvement of the mammary gland in carcinoma is most frequently associated with marked impairment of the general health, and earlier or later that condition known as cachexia is developed, so as to become characteristic of the progress of a carcinomatous disorder. There is some plausible ground for doubt as to cause and effect in the local and general manifestations of carcinoma, and hence a question in regard to the circumscribed area of the disease at the outset in the tissue of the mammary gland. It is held by most observers that cancer of the breast is primarily a strictly local trouble and if removed at an early period must be eradicated. But either the tumor has from the outset a proclivity to reproduction, comparatively few cases are operated on sufficiently early to arrest their progress, as it is well known that a return of the neoplasm is the most frequent result of operations for the removal of carcinomatous tumors of the breast. This holds in regard to the complete as well as the incomplete mode of operating in these cases, and in those patients, without enlargement or induration of the axillary glands, there does not appear any good and sufficient reason for the invasion of this region by the knife. There are no indications of trouble beyond the limits of the breast and under such circumstances, it must prove very difficult, if not quite impracticable, to identify the lymphatic glands and remove them. If it was simply a matter of indifference as to the effect of this complete operation upon the patient, each operator might cut and slash to his hearts' content in the axillary and in the clavicular space, but when it adds to the traumatism in a way to damage the prospects of recovery, it certainly should be reserved for the removal of diseased lymphatics. Even in a case of involvement of the ganglia in the clavicular space, it is problematical whether the shock of enucleating them may not overbalance any advantage which can accrue from their removal.

In the legacy left to the profession by Dr. Douglas Morton, in answer to the question, "How should we operate for mammary cancer and when?" it is held that the "completed operation" is not only far more dangerous than the old one, but in an important sense is still incomplete after all. As it is usually done, the axillary glands and some tissues about them are removed. The intervening lymphatic ducts that may be full of cancer cells, especially at their valves, are at best only partially removed; the alveolar buds that shoot out from every gland from the moment it enters the process of becoming fixed are cut or torn through, causing cancer cells to be scattered over the surface of the wound soon

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to become fixed as new foci. Furthermore the supra- and sub-clavicular glands that in many, perhaps most of the cases, become sooner or later, are in the "completed operation" as it is ordinarily done, left intact; even Gross, a most earnest advocate of this operation, removes these glands only when they are palpably enlarged. Butlin calls it a "surgical blunder."

In order to examine systematically the conditions that bear upon "clearing out" the axilla, Dr. Morton claims that all mammary cancer subjects may be divided into four classes:

1. Those in which the disease has not only infected the axillary glands, but by metastasis or otherwise has involved the internal tissues and organs.

2. Those in which these glands have become infected, but in which the disease has gone no further.

3. Those in which metastases have occurred without infecting the glands.

4. Those cases in which the disease is as yet limited to the mamma.

He goes on to say that the cases of the first class are plainly not operable. In those of the second, if clearing out the axilla and removing every gland in the whole neighborhood of the diseased breast and the tissues around them, as well, were to complete the operation as the term implies, it would certainly be justifiable, provided the mortality after this procedure is not too great.

The statistics of local recurrences given by Gross in 1888 are quoted by Morton as follows:

Of 409 cases, partial or total extirpation of mamma, without glands, was done in 96 cases.

Recurrence in or near the cicatrix, 46 cases, being 47.91 per cent.

Recurrence in cicatrix and glands, 31 cases, being 19 79 per cent.

Recurrence in glands alone, 19 cases, being 32 29 per cent.

Of amputation of breast with removal of glands, 313 cases.

Recurrence in or near cicatrix, 235 cases, being 75.08 per cent.

Recurrence in glands alone, 38 cases, being 12.14 per cent.

Recurrence in both places, 40 cases, being 12.77 per cent.

These figures, Morton believes, show the impossibility of doing any operation that deserved to be called "completed" after the invasion of the axilla has taken place. They show, too, that the number of local foci so far from being diminished, is certainly very much increased. These facts, taken with the other very important fact that the immediate mortality after the "completed operation" is double (accordinn to the statistics of Butlin) that after the incomplete, seems to Morton, to utterly condemn the former as a life-saving measure in this class of cases.

In the above division, the third class of cases, in which metastatic tumors have occurred, without antecedent glandular involvement, are clearly not amenable operation.

The fourth class embraces those cases in which the cancer is as yet strictly local, and hence eradicable by operation.

Morton thinks that after the axillary glands have once become involved it is highly improbable that the disease can be eradicated by any surgical procedure.

A point of great moment, as to the extent of operative procedure, pertains to the leaving of any portion of the mammary gland, when only partially implicated in the carcinomatous growth. The esthetic element should never enter into the decision of such a vital question as the arrest of carcinoma, and whenever a breast is the seat of a malignant tumor, whether wholly or partially involved, there should be no hesitation about removing the entire glandular structure. If a part of the mammary gland only seems to be involved and it is evident the knife can be carried cutside of the neoplasm into the apparently sound tissues of the breast, there is every reason to believe that if any portion of the gland is left it may become the seat of disease and that recurrence will most likely follow the operation. On the other hand, an entire ablation offers better prospects of success.

The preservation of such part of the skin as may serve to cover up the denuded surface of the thoracic wall, after removal of the breast depends upon the extent to which the cutaneous covering of the tumor is adherent, and consequently involved in the disease. It may be that the direction of the incision will influence materially the capacity for bringing the edges of the skin together, owing to the looseness of the attachment and the elasticity of the tissues in one direction being greater than in another so as to favor traction. In most cases saliency of the tumor admits of making a double epileptical incision, so as to take away the adherent cutaneous covering with the diseased breast, and all the skin which is loosely attached by cellular tissue may be safely preserved to cover the wound without undue traction. Retentive ligatures, at the distance of an inch or more from the margin, may be inserted at the points of greatest tension, and between them broad strips of adhesive plaster may be placed to secure union of the edges. If cancer of the breast returns after removal it is inoculated by most writers to operate again, so often as the growth appears, and it is held that thus the life of the patient is prolonged. At the present day, when a patient is free from suffering by an operation, under the influence of anesthesia, there can be no objection to the repetition of cutting while the patient is disposed to submit to the knife. But a patient whose breast was removed in a carcinomatous state some three and a half years ago, had a return of the disease within two years, and took matters into her own hands by employing a quack to treat it with escharotics. I had occasion to examine this lady since, and if she was correct in her conclusion that there was a redevelopment of the cancer, it must be allowed that benefit has resulted from the

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escharotic treatment. The healing process has proceeded so that all the wound is completely cicatrized.

The object lesson afforded by the good result in the case has served to gain another convert to escharotic treatment, in the person of another patient, upon whose breast I had performed a primary operation and a colleague had done a secondary operation for a recurred tumor.

Being impressed with the failure of the knife to avert the carcinomatous growth, the husband of the lady acquiesced in her desire to submit to the escharotic treatment on the occasion of the reproduction of the tumor a second time. In my operation the mammary gland was removed, but finding no involvement of the axillary glands, this region was left untouched. When the second operation was determined upon, in my absence from the city, the colleague upon whom it devolved found an enlarged lymphatic gland near the anterior axillary fold, which was removed by the extension of his incision from the site of the tumor, so as to inclued this gland.

This complete operation did not secure any better result than my incomplete operation had done, and within a very few months I was called again to verify, not alone the return of the tumor, but also the development of the gland. My opinion was requested as to these growths, which were pronounced to be indications of an unmistakable kind, that the carcinomatous disease had not been eradicated. It was also stated that, in view of the past failures with the knife, little was to be expected from a third cutting operation for the extirpation of the reproduced tumor and gland, and the husband was left to his own choice in selecting the treatment of escharotics on this occasion.

The great suffering inflicted upon the patient by the employment of escharotics in the treament of malignant growths is an objection of great moment, and yet with the use of morphine the pain is so far mitigated as to become bearable. In a recent treatment of epithelioma of the nose, advanced to the ulceration stage, involving the ala and septum the pain from destructive action of the Vienna paste at the outset and the arsenical paste susbequently, required the free use of hypodermics of morphine and atropia to enable the patient to submit to their applications. He bore the pain in the spirit of martyrdom, as I had advised removal with the knife and then to perform a plastic operation immediately to rebuild the nose from the tissues of the cheeks. Upon his urgent request to have the escharotic used, I resorted to this mode of treatment under protest, telling him that it would leave him greatly disfigured to effect a thorough eradication of the cancer. He seems to be now free from disease after the destruction of al most the entire nose.

The relative advantages of the knife and cauteries in the management of carcinoma depend very much upon the progress of the disease. In the incipiency of the local trouble there can be no doubt in regard to the excision being preferable to cauterization, but after full development of a tumor with a tendecy to degeneration and breaking down of its structuse the resort to escharotics has its advantages in extending to the remote ramifications of the disease. It is a prevalent impression that certain caustic applications attack the diseased structure without affecting the sound tissues and that the so-called roots of a cancer are thus destroyed. There seem to be some just foundation for this belief in regard to application of arsenic, but the destructive effect of caustic potash in the form of Vienna paste extends to every vital structure with which it comes in contact, and the same holds in reference to the plaster of sulphuric acid and charcoal as an escharotic.

The chloride of zinc application is not accompained with so much pain as the previous named escharotics, and yet does not prove so effective, owing to its less destructive agency.

Quite a number of vegetable products have been likewise employed for the treatment of cancerous affections, but are not so prompt and radical in their effects as the chemical escharotics, and, as a consequence, required a longer time to bring about the disintegration of the morbid growth.

One of the most serious obstacles to the progressive improvement of caustic means applied by so-called doctors is the infautation that their interests are best served by secrecy as to the remedies used by them. The people who seek their advertised treatment are imposed upon by the air of mystery thrown around their procedures, and if the facts were known, it would appear clearly that there was no virture in their drugs.

The treatment of carcinomatous tumors of the breast with caustics has been tested fully by Bougard of Belgium. His paste contains chloried of zins, arsenic, cinnabar and corrosive sublimate. Of one hundred and sixty cases, sixty-two or nearly forty per cent were free from recurreneces three years after treatment.

Bougard's experience leads to the inference that there is something connected with the escharotic application in cases of carcinoma, which is more pervading and far-reaching than simple excision with the knife As this cauterization does not look to the dissection of the glands from the axilla or clavicular region, it seem that this is not requisite to secure the most favorable results.

Having received a circular letter some two months ago, embodying interrogations upon various points, connected with cancer of the breast, it may not be out of place to incorporate them with my replies.

1. Have you ever seen a breast cancer heal spontaneously? Answer—No.

2. Have you ever lost a case as the direct result of operation, since the advent of antiseptic methods? Answer—Yes.

A single case of encephaloid cancer of the breast of large proportions and necessitating extensive exposure of the thoraic wall, died from shock six hours after complete ablation of the mammary gland.

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3. About what is the expectation of life after operation? Answer.—This depends to a large extent upon the period at which an operation is undertaken; those done early, recover, and those delayed rarely escape a fatal termination.

4. Have you any case of survival of operation without recurrence longer than three years? Answer.—One case was operated upon nearly five years ago, who has had no return of disease; and is in good health at pres ent. The entire breast was removed without entering the axilla.

5. Have you any case of survival of operation for three years, and later development of cancer? Answer. —No.

6. About how many cases have you operated upon? Answer.—Ten cases within the past ten years.

7. Has it been your invariable practice to remove the axillary glands, at the time of operation, or merely in cases when there was evidence of involvement? Answer.—The axilla has not been opened except when there was evident enlargement and induration of the lymphatic glands; and my observation of a departure from this course by others has not proved satisfactory. There is ground for doubt as to the advantage of removing the lymphatic glands even when involved in the disease.

The Possibility of Cholera Infection by Salted Sheep Guts.—The *Abs. of San. Rep's* for October 20, contains a report from Dr. Dunbar, director of the Hamburg Hygienic Institute, of an investigation of salted sheep guts from a nominally infected locality, for the purpose of discovering how long cholera vibriones were able to exist upon them. The results of the inspection showed that those guts that were infected with cholera vibriones showed evolutionary organisms after having been kept for six hours in a refrigerator, while guts kept at a temperature of 22° and 37° C. showed evolutionary forms after three hours, but not after six.

Grape Juice and Woman's Milk.—The *Lyon Med.* for October 1, states that the ancients established the curative property of grape juice in certain digestive troubles, dropsies, etc. Chemical analysis, by showing a great analogy between grape juice and woman's milk, afford an explanation of the happy effects that have been demonstrated by the uropathic physicians. This may be judged by the analyses. The grape may contain microbes either when found as raisins suspended under the joists of a country house or in the fresh fruit. Dr. Schnirer has found tubercle bacillus in the water in which grapes taken from a basket in the streets had been washed.

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Bactericidal Property of Mucus.

A priori one would suppose the cavity of the nose to be a hod bed for the development of bacteria, for here small particles of solids suspended in the air are filtered off during the breathing process and heat and moisture are present to favor the growth of germs. But, judging from the bacteriological researches of Wurtz and Lermoyez it appears that this is not the case on account of the decided bactericidal properties of mucus. Zaufal was one of the first who have pointed out this property of mucus. Wurtz and Lermoyez (*Annales dec Maladies de l'oreille*) have made a series of instructive and simple experiments in order to prove the bactericidal property of mucus. Sterilized cotton wicks were introduced into the nostrils of healthy individuals so as to absorb the secretion, after which they were, some of them sterilized and others not, introduced into test tubes and mixed with cultures of glanders-bacilli in boullion and allowed to stand for from two and three-fourths hours to three weeks at a temperature of 38° C. Inoculations made with this mixture upon nutrient media remained sterile, also guinea pigs were not affected by them, while control-inoculations with the bouillon killed the guinea-pigs in from two to three days. Similar experiments were made with other bacteria in which the mucus also showed bactericidal or growth-arresting properties.

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Suppurations During and After Typhoid Fever.

Suppurations which occur during or after an attack of typhoid fever in any of the organs and tissues of the body, may be divided:

1. Into those in which only the usual pyogenic cocci are found and which are due to a secondary infection.
2. Those in which typhoid bacilli or bacilli coli and pyogenic cocci are found.
3. Those where only typhoid bacilli occur.
4. Where bacilli coli have been the cause of the suppuration.

Von Melchior in *Hospitals-Tidende*, has reported a case where, ten and a half months after reconvalescence from typhoid fever, bacilli were found in an osteo-periostitic abscess of the tibia, which he demonstrated to be typhoid bacilli by the cheminal reaction of their cultures. The clinical characteristic of suppuration due to an invasion of typhoid bacilli are according to Mel chior the following:

It develops insidiously and slowly and occurs late during reconvalescence or even much later; they occur successively at the most distant places, are torpid and exceedingly obstinate in healing. The pus has in most cases a characteristic appearance, it is of a reddish or brownish color, of thin consistency and odorless, and often has a grayish sediment.

Treatment consists in extensive incision, curetting, cauterizing with nitrate of silver and application of the Paquelin.

Hysterectomy for Cancer of the Cervix by Combined Abdominal and Vaginal Dissection.

Maurice Richardson, M.D., has written an excellent article upon this subject, from the standpoint of the general surgeon and anatomist. We miss, in the otherwise very instructive article, any differentiation between the malignancy of carcinoma starting from the portio vaginalis uteri and those taking its origin from the supravaginal portion of the cervix and and body of the womb. Carcinomata originating in the vaginal portion of the cervix, where it is covered with squamous epithelium are not near so malignant as those of the supravaginal portion and body of the womb, which originate by a proliferation of the glandular epithelium and not infrequently get well by thorough curetting. We take the liberty to reproduce the article from the Boston *Medical and Surgical Journal* as follows:

In liability to recurrence after operation, uterine cancer equals, if it does not exceed, cancer of the breast. The reasons for this are to be found in the local malignancy of the uterine growth, a malignancy developing and extending as rapidly in the cervix as in the breast, and in the almost insurmountable difficulties encountered at its complete extirpation. Secondary infiltration of the broad ligaments—the earliest possible metastasis in cancer of the uterus—renders the entire removal of the disease impracticable, if not impossible; and were this invasion as universal as that of the axillary lymph-glands in cancer of the breast, no radical or dangerous operation upon the uterus would be justifiable. The surgical procedures, therefore, would be limited, and only those measures would be selected that relieve suffering and prolong life.

Clinically we do not find the broad ligaments invariably affected, even in cases of extensive local disease; on the contrary, in many instances no secondary infiltration whatever is found in separating the uterine ligaments. Not only by the absence of infiltration in these cases, but also by the numerous permanent cures following hysterectomy, are we justified in concluding that uterine cancer is infrequently associated with early metastases. Not that cancer of the cervix manifests as slight a malignancy as cancer of the lip in its early stages, for in some instances, at least, the former shows a tendency to rapid growth and invades the surrounding parts almost before its presence is known, or even suspected. Nevertheless, my experience leads me to believe that cancer of the cervix is distinctly less malignant in its early development than cancer of the breast.

In breast tumors the patient's fears lead more frequently to early consultation than in uterine disease, for the existence of the latter often remains unsuspected, the patient supposing her symptoms merely an excess of the normal physiological discharge. A natural tendency towards concealment gives us but rarely a chance to investigate and treat either disease in its earliest stage. Moreover, in both breast and uterine disease, pain is so frequently absent that no conspicuous symptom remains to call attention to these regions, so that a tumor may obtain considerable size in the breast before it is discovered, or the uterine discharges may become excessive or even offensive, before a physician is consulted. Hence, most cases of early uterine cancer are discovered by the physician in the course of treatment for symptoms in which serious disease is not suspected; while the occasional absence of symptoms allows breast tumors to become hopelessly extensive before there is any suspicion of their growth.

Cancer may extend from the cervix in all directions and invade the vaginal mucous membrane and the important structures lying in close relation with it. In fact, the epithelial infiltration must be very circumscribed not to involve also, in a hopeless entanglement, the bladder wall, the rectum or the ureters: yet the disease is occasionally limited to the internal layers of the cervix or to the body of the womb without appearing in the peri-uterine structures at all. But, unfortunately, cancer seldom confines itself in this manner; we must expect the contrary in most instances and find the disease spreading in all directions in hard and ulcerating masses.

It follows from clinical and pathological considerations that cases of cervical cancer favorable for extir-

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pation and permanent cure are rare, that operations for relief have very decided limitations and that at best the outlook is gloomy.

From a brief consideration of the anatomy of this region, we shall find ourselves still more limited and un successful in our efforts thoroughly to extirpate cancer of the cervix.

The analogy between cancer of the lip and cancer of the cervix is striking, clinically, in that both seem at first to have only a local malignancy, while both, when well under way, exhibit a rapidity of growth and area of metastases that is deplorable. In lip cancer, however, the nearest structures, the invasion of which makes interference well nigh hopeless, are the submaxillary glands and the lower jaw, not to mention the body of the cheek. In uterine cancer, on the contrary, a peri cervical extension of much less than an inch renders cure by excision absolutely hopeless.

A clear idea of the relations between the cervix, bladder, rectum, peritoneum and ureters is therefore of the greatest importance, not only for prognosis but for technique. The following brief description of their relations is based upon numerous dissections upon both the living and the dead subject, made with special reference to hysterectomy.

Anteriorly, the extravaginal portion of the cervix is separated from the walls of the bladder by areolar tissue, easily dissected by the finger after cutting the vaginal attachment. The intravaginal portion is separated from the bladder by the superior vaginal wall. The vagina is not so easily separated from the bladder as the uterus, being more intimately attached. When infiltrated, the vaginal mucous membrane is inseparable from the bladder wall, though the disease does not grow towards the vesical mucous membrane as rapidly as it spreads laterally.

Posteriorly, the cervix is separated from the rectum by the fold of peritoneum and vaginal mucous membrane, which together make the base of the pouch of Douglas. This interval varies somewhat in extent. Separation of the vagina and rectum is easy because they are connected only by loose areolar tissue, easily dissected with blunt instruments or with the finger. Separation of these structures, however, is not so easy as we go back, the vagina and rectum being more intimately cannected near the cervix. As in the upper vaginal wall, malignant disease shows a greater tendency to spread than to penetrate; so that there may be a very extensive infiltration and ulceration limited to the posterior wall, the rectal mucous membrane apparently remaining intact. This fact I have observed frequently in advanced cancer of the cervix and vagina. The rectal mucous membrane, in many cases, is scarcely, if any, involved, so that it slips easily in all directions over the vaginal mass. Not that this is al-always the case, for we often find recto-vaginal fistulæ in advanced cancer; but it is frequent enough to justify us at times in operating where the vaginal mucous membrane alone is involved. The prognosis is very unfavorable, however, because we must literally shave the tumor in our dissection.

In the intimate relations between the ureters and the cervix, we find our most discouraging facts, both as regards prognosis and technique.

Entering the pelvis under the peritoneum, near the origin of the internal iliac artery, the ureters pass downward, forward and inward. Approaching the cervix they run directly forward on each side toward the superior vaginal wall. In their passage to the bladder they are separated from the cervix by a very short interval, varying in different subjects, but practically almost in contact with it. They are loosely placed in the surrounding tissues in this part of their course, and they may easily be isolated and drawn to one side. The distance between the ureters and the cervix may depend upon disease and upon the width of the cervix itself. In the blind manipulations of a vaginal hysterectomy, where nothing can definitely be seen, there is always danger of wounding these vessels. Vaginal hysterectomy, therefore, is not only hazardous because the ureters may be wounded, but it is also likely to fail of permanent cure, for the slightest extra-cervical infiltration must involve tissues in the immediate vicinity of these structures so essential to life.

The broad ligaments, extending outwards from the anterior and posterior surface of the uterus, are reflected at the pelvic brim, to which they are attached. Thin above, the duplication of peritoneum becomes widely separated as we approach the cervix. An antero posterior longitudinal plane, passed through the ligament at its reflection from the uterus, makes, therefore, a triangular section, the apex of which is the Fallopian tube, and the base the lateral vaginal attachments.

Between the peritoneal folds at the apex of this triangle we have the Fallopian tube. As we descend close to the uterine body we find the peritoneal reflections gradually separated. In tying and dividing the attachments of these folds the tissues broaden, till at the vaginal insertion, our clamps embrace a mass of considerable size. In vaginal hysterectomy the reverse is true. The most important structures involved in the operation—the arteries, veins and ureters—are situated between the lower portion of the peritoneal folds. From the position of the ureters, between these folds, always very close to the cervix, we cannot hope for a broad margin in the excision of cancer of the cervix, under any circumstances, as we may in cancer of the lip and cancer of the breast.

The dangers encountered in vaginal hysterectomy are wounding of the ureters and hemorrhage. It is, therefore, desirable so to perform the operation that, first, the ureters may be avoided by as narrow a margin as possible; and, secondly; that the arteries and veins may be securely tied. Leaving for the present the question of septic infection, it is evident that vaginal extirpation of the uterus must be performed without a definite knowledge of the location of the ureters. They can

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only be avoided by clinging closely to the cervix and to the uterine body. This is very undesirable where it is necessary to remove the disease as radically as possible. In vaginal hysterectomy we grope between the ureters and not only run great risk of wounding them, but we do not give the disease as broad a margin as we otherwise might.

By the vaginal route, hemorrhage is a conspicuous danger, If our ligatures slip, or our clamps break or come off, we may have, deep within the pelvic cavity, an alarming hemorrhage which can only be checked with the greatest difficulty. Indeed, it is impossible at times to prevent a fatal hemorrhage, even with the greatest skill and experience. Not that the control of bleeding is difficult in all cases, for we often find the uterus so movable that all the manipulations may be performed at the vaginal outlet. Where the uterus is large and firmly fixed, however, it is impossible to bring the broad ligaments within easy reach, and we must then apply long clamps, which are liable at any time to slip or to break. In difficult cases, therefore, we must expect formidable dangers and deplorable accidents.

The advantages of the vaginal operation lie chiefly in drainage.

By the suprapubic operation, in the Trendelenberg posture, we are able to determine the condition of the broad ligaments, to recognize a hopeless metastasis, and to dissect with precision. The slight dangers of this method are more than balanced by the thorough knowledge we may obtain of the nature and extent of the disease. In cases evidently hopeless the abdomen can be closed and a palliative operation by the vagina substituted. But if, by abdominal exploration, we find no contra-indications to a complete hysterectomy, we may proceed with much greater safety, and more thoroughly remove the diseased uterus and appendages. From the pathological standpoint, therefore, the abdominal route is preferable because we can remove not only the uterus and the cervix, but we can include the broad ligaments and the structures contained within their folds.

From the standpoint of the anatomist this operation is much preferable to the vaginal method. With the patient in the Trendelenburg position, a clean dissection with the knife or scissors may be made as far as the vaginal attachment. Starting at the pelvic brim, the structures may be successfully tied and cut until we approach the cervix, when by careful manipulations the ureter may be brought into view. The dissection from this point may be carried on as intelligently as a dissection of the common carotid. The ureters on either side may be brought into view, held out of the way by an assistant, and the vaginal attachment severed. The uterine arteries can be found by heir pulsation, and tied. As we approach the vaginal attachment, however, it is very hard to tell just the limits of the disease. Up to this point the operation may be performed with great ease and with perfect safety. Separation of the vaginal attachments on all sides must now be made with great care if we would avoid wounding the rectum, the bladder and the ureters. During the prolonged manipulations necessary to avoid these errors, we run a considerable risk of a serious septic infection. It is to avoid these difficulties and dangers that I advocate the combined vaginal and abdominal dissection.

By the abdominal method the septic masses are constantly drawn toward the area that we wish to protect; by the vaginal method they are constantly drawn from that region. By the combined abdominal and vaginal operation the uterus may be delivered either through the abdomen or through the vagina. It makes little difference, however, which way is selected, because, having separated carefully the cervical attachments of the vagina below, the completion of the operation by the abdominal route is rapid, and the peritoneum runs little if any more danger of infection than by the vaginal route alone.

The method which I advocate as the safest and most rational procedure for the radical excision of uterine cancer is first to separate by clean incision the diseased cervix from the vaginal mucous membrane by as broad a margin as possible without wounding the rectum, bladder, or ureters. The incision should be carried through the mucous membrane until the areolar tissue is reached; then dissection should be carried on by the finger or by some blunt instrument until we are close to the peritoneum, care being taken not to open the peritoneal cavity. It is, of course, necessary previously to have disinfected as far as possible the cancerous ulcerations. The hands should now be thoroughly sterilized, and the abdominal incision made with a second set of instruments. Having, in the manner described, separated the broad ligaments and isolated the ureters, we may rapidly connect the vaginal with the abdominal incision. The uterus may be delivered through the vagina or through the abdominal wound. If the mass is too large easily to be delivered by the vagina, the abdominal route should be chosen; not that it makes any great difference where the exposure is so brief, especially if the intestines, in the Trendelenberg position, are abundantly protected by sterile gauze. After removal of the uterus the folds of the peritoneum may be united by continuous suture, or a gauze drain may be provided through the vagina In my experience there has been, by the abdominal method alone, a mild sepsis in two cases; by the vaginal method alone there has been a fatal general peritonitis in one case; all other cases have recoved without complications of any sort.

In clean hysterectomies, I think a continuous suture should be applied; is septic operations a free dependent drainage should be provided by leaving a gauze drain in the vagina.

The prognosis as to recurrence in even the most radical operation upon a cancerous cervix is bad; for, under the most favorable circumstances, the margin of

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healthy tissues seems utterly inadequate. A small cancerous nodule in the centre of a large breast demands excision of the whole organ, and even then recurrence is the rule. An infiltrating epithelioma of the lip requires in its proper removal the broadest possible margin of healthy tissue; and if that margin is a close one we look upon recurrence as almost certain.

In uterine cancer, therefore, the prognosis is necessarily bad if there is any extra cervical infiltration whatever; and while under these circumstances hysterectomy is justifiable, its performance cannot be strongly urged. If the vaginal disease is extensive, only local palliative operations, performed extra peritoneally, are justifiable.

Conclusions.—The advantages of the vaginal method are:

1. Less liability to peritoneal contamination.

2. More intelligent and thorough dissection of the local disease.

Its chief objection is the difficulty in controlling hemorrhage.

The advantages of the abdominal method lie:

1. In a conclusive investigation of the disease itself—its local extent and its possible remote metastases.

2. In the rapidity and safety by which the broad ligaments may be tied and cut.

3. In the ease with which the ureters may be isolated and kept one side.

4. In control of hemorrhage.

Its chief disadvantage is the impossibility of thorough dissection and removal of the cervical portion of the disease.

The superiority of the combined method is seen:

1. In the intelligent and thorough dissection both of the local disease and the broad ligaments.

2. In the certainty by which hemorrhage may be prevented.

3. In the protecting of the ureters.

4. In the saving of time.

The combined method is applicable more especially to cases where the disease involves the cervix and a portion of the vaginal mucous membrane, and to cases in which the uterine body is large and fixed. It should also be employed where for any reason it may be difficult to separate the vaginal attachments.

The New Volume of the Index-Catalogue.—The fourteenth volume of the "Index Catalogue of the Library of the Surgeon General's Office, United States Army", recently issued, brings the vocabulary to the word Universally. It shows evidence of having been prepared with the same thoroughness and carefulness that have been brought into play in the preparation of the preceding volumes. Fourteen pages are devoted to the seventh addition to the Alphabetical List of Abbreviations of Titles of Medical Periodicals, and the text occupies 1016 pages. It is to be presumed that one volume more will complete this great work.

ABSTRACTS

Acute Alcoholic Intoxication in Infants and the Abuse of Alcohol in the Gastro-Intestinal Disorders of Infancy.—In the *Medical News* of October 28, Dr. Henry Koplin, of New York City, sounds the alarm in regard to the indiscriminate administration of alcoholic stimulants to infants and children. After expressing his surprise that the address delivered by Professor Demme, of Berne, which in 1891 was widely noticed and largely commented upon, should have so utterly failed to impress itself upon the profession at large. Dr. Koplin states that in the care of his large infant and children's dispensary clientele he had noticed, during the summer months, and for the past few years had called attention to the very large number of infants suffering from acute or subacute gastro-intestinal disease, that were the victims of an unrestrained administration of solutions of whiskey or brandy. The parents of these infants were directed by their physicians or sanitary advisers to give the little patients minimal quantities of the stimulant at stated or indefinite intervals, which procedure only too frequently resulted in an administration *ad libitum*, and in the establishment of a more or less profound state of intoxication. The primary stage of intoxication is marked by peevishness, overrestlessness of the little sufferer; the features acquire a dull, blank expression, very much like that seen in the intoxicated adult. Again, the eyes may be large and brilliant, or vacant and presenting a stare. In a more advanced stage of intoxication the infants present the signs of unconquerable stupor. In spite of pains or movements they are actually soparose. They no longer notice their surroundings. At intervals, when the pains of colic are great, the infant may cry out. While admitting the beneficial effect of judicious alcoholic stimulation in certain conditions Dr. Koplin emphatically insists on its uselessness, nay, harmfulness in the treatment of acute disturbances of the gastric and intestinal functions. Nausea and vomiting seem to be checked at the outset by small quantities of ice and brandy. The effect is always transient in infants as it is succeeded by vomiting which proves uncontrollable and more serious than that which had ushered in the illness, to be followed by symptoms of intoxication. To administer alcoholics in the acute stages of gastro-intestinal disease, is clearly and diametrically opposed to the physiological laws of digestion. If the gastric functions are disordered, if the acidity is reduced, and as in severe cases even the enzyme is not produced in its normal quantity, alcohol only makes the diseased state worse. In corroboration Dr. Koplin quotes Epstein's almost classic paper on the nature and treatment of cholera infantum (*Henoch's Testschrift*, 1891). The advocates of alcohol aim by its administration to stimulate gastric secretion and to support the heart of the little patient. The writer suggests

a totally different course: instead of stimulation complete rest should be strictly observed. No food, except solutions of egg-albumen, is given for twenty four hours After the establishment of gastric tolerance and the abatement of all acute symptoms beef juices are recommended, the gradual return to a milk diet being indicated when all danger of gastric irritability has passed. In cases of subacidity minute doses of hydrochloric acid are called for. As cardiac stimulants Dr. Koplin recommends spartein from $^1/_{64}$ to $^1/_{32}$ grain, every few hours, or $^1/_{500}$ grain of strychnine; perhaps also one-half minim of the combined tinctures of strophanthus and digitalis every three hours. In conclusion Dr. Koplik points to the gratifying results obtained by him in the treatment of the very large number of cases coming yearly under his care,—absolutely without the aid of alcohol in any form. E C R.

Errors in Urine Analysis.—Mr. P. Carles, of Bardeaux, calls attention in the *La France Medicale* to the grave errors of analysis in which conclusions are drawn from the examination of urine passed at a single evacuation. Some years ago he was requested to act as arbitrator in a case of a diabetic patient whose urine had been analyzed by two competent chemists, the dictum of one being "no sugar," while his colleague recorded quite a considerable amount. The mystery was readily solved by Mr. Carles who subjected two specimens, a diurnal and a nocturnal one, to analysis; the former contained fifty grains of sugar to the liter while the latter gave a negative result. Since then he had repeatedly occasion to observe the striking difference between urine passed during waking hours and that excreted during night not only with regard to the amount of sugar but also to that of albumin and some of the normal constituents of urine as urea, uric and phosphoric acids. To guard against such errors there is but one way, and that is to analyze a specimen taken from a mixture of the entire urine excreted in the space of twenty-four hours. Such are the detailed instructions given to the patient:

1. Empty the bladder at 7 A. M., and reject the urine obtained.

2. From that time on, through twenty-four hours, collect the urine in a well cleansed, covered receptacle, including that passed at 7 A. M. of the next day. Keep the vessel in a cool place.

3. Measure the total quantity, shake the vessel well, and fill a sample bottle.

4. Label the bottle and record the quantity for the twenty-four hours.

Of how great an importance the knowledge of the total amount passed in twenty-four hours may prove, is strikingly demonstrated by the following case: A diabetic passed on July 1 in twenty-four hours three liters of urine, each liter containing fifteen grains of sugar, or a total of forty-five grains. On July 15 he excreted two liters, with eighteen grains per liter. Had not the total quantity been taken into consideration the amount of sugar would have appeared to have increased, while in reality it had grown noticeably smaller, the patient having excreted on the first occasion 15×3 or forty-five grams, and on the second but 18×2 or thirty six grams

E. C. R.

The Psychical Sequels of Gastric Dilatation.—Dr. Devay, as reported in the *Journal de Medecine et de Chirurgie*, of Paris, instituted, during his stay at the Asylum at Brow, a great number of observations with regard to the influence of gastric dilatation on the nervous system. He demonstrates that in those predisposed to mental alienation, dilatation may directly cause insanity, and that in the previously insane it is apt to most peculiarly modify the form of their mental disease. Just as the septic uterus, after an accouchement, may poison the entire system, and superinduce puerperal insanity, so the dilated stomach may produce a toxic condition with a strong tendency to melancholia. Bayle and Maury have already pointed out the relation existing between gastro enteric disease and some forms of melancholia, but they interpreted the latter as a sympathetic phenomenom. It rested with Dr. Devay to demonstrate the process to be one of genuine intoxication. The manner in which dilatation of the stomach produces its psychical effects is simply this: The activity of the gastric juice being markedly diminished in a dilated stomach, bacterial fermentation is set up, the toxic products of which profoundly affect the central nervous system, calling forth phenomena of either a depressive or convulsive nature. M. M. Bauveret and Devic have shown how changes of character were wrought by dyspeptic troubles, and how in the predisposed the latter may prove the stepping stone to mental alienation. Individuals afflicted with gastric dilatation present a state of mental depression manifested by premature weakening of all intellectual faculties as of memory, concentration, will-power, judgment and of recaptivity for moral impressions. The influence exerted by gastric dilatation in the insane is also well illustrated by the modification which the pre-existing form of insanity undergoes when dilation of the digestive function the mental disease readily lapses into its previous form. Dr. Devay recommends in all of these cases the institution of an active gastric and intestinal treatment. The asepsis of the alimentary tract should be insured with all means at our command. A free evacuation of the bowels is to be induced regularly. If feasible, the stomach is to be subjected to frequent lavage with a 0.50 per cent naphthol solution, while internally preparations of naphthol combined with English magnesia are to be administered. This course of treatment has often produced most happy results.

E. C. R.

Viraginity and Effemination.—In following up the chain of evolution in animal life from its inception in primordial protoplasm to its end, as we now find it, we discover that the interlinking organisms are,

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in the beginning, either asexual or hermaphroditic. The moneron, the lowest form of animal life, simply multiplies by division. The different elements through which propagation and generation are carried on, are undoubtedly present even in the moneron, but are not differentiated. The moneron is an organless, structureless organism, consequently asexual. The cell, on the contrary, is hermaphroditic, for it contains within itself the necessary elements for reproducing itself. The ameba is the connecting link which connects all terrene life with primitive bathybian protoplasm, and is, strictly speaking, a true hermaphrodite. Ascending at once to the sixth stage in the ancestry of man, we come to the acelomi, or worms without body cavity. These worms are phylogenetic, consequently hermaphroditic. I do not mean to say that these worms have the organs of each sex equally developed; therefore, in the use of the word hermaphrodite, I use it in its broadest sense. I simply mean that they are autogenetic. In the rhabdocela the sexual organs appear in their simplest forms—a testis anterior to a single or double ovary. Other gliding worms have a more complex arrangement of the sexual organs, but most of them are true hermaphrodites. Next in the chain of evolutionary development, and one step nearer man, we find the soft worms (scolecidæ); from a branch of this family the parent group of vertebrates was developed. The immediate ancestor of the vertebratee was either the amphioxus (lancelet) or some other notochordate animal, whose type is now extinct. Thus we have traced hermaphroditism from the ameba to the amphioxus, from the ancestor of the parent cell to the ancestor of the vertebratee. We could carry it further, but it is unnecessary. Effemination and viraginity are due directly to the influence of that strange law laid down by Darwin—the law of reversion to ancestral types. It is an effort of nature to return man to the old hermaphroditic form from which he was evolved. It is an effort on the part of nature to incorporate the individualities of the male and female, both physical and psychical, in one body. The phenomenon of atavism is more apt to occur in feeble types than in strong, healthy, and well-developed types. Microcephalism, occurring, as it most frequently does, among ignorant, ill-nourished, and unhealthy people, is an example. Dolichocephalism and a flattening of the cranial arch, with corresponding loss of capacity in the skull—types that we see everywhere among the depraved and vicious—are other examples of this tendency of atavism to seize on weakened and unhealthy subjects. Effemination finds more victims among the wealthy and the educated than among the poor and uneducated. This phenomenon is a psychic rather than physical hermaphroditism, and is directly traceable to the enervation produced by the habits of the wealthy and unemployed. Wealth begets luxury, luxury begets debauchery and consequent enervation. Periods of moral decadence in the life of a nation are always coincident with periods of luxury and great wealth, with consequent enervation and effemination; examples of this may be found in the histories of Rome, Greece and France. During the reign of Louis XV., examples of effemination crowded into the court and vied with the royal fop in the splendour of their raiment and effeminacy of their bearing. Psychic hermaphroditism does not occur in uncivilized or half-civilized races. The reason for this is patent. Atavism finds among them no weakened and enervated subjects on whom to perpetrate this strange travesty on nature. Large cities are the hotbeds and breeding-places of the various neuroses. There, general paresis treads closely upon the heels of sexual neurasthenia, while the victims of hysteria and kindred ills are almost countless in their number. What wonder, then, that the offspring of such parents should be weak and neurasthenic, and fall easy victims to the thousand and one erotic fancies that beset them. What wonder that atavism here finds its richest field, and plays its strangest and most fearful pranks, sending men into the world with the tastes, desires, and habits of women, and women with all the mental habitudes of men! Juvenal wrote in scathing, searing sarcasm of the degeneracy of the Roman youth; effemination was very prevalent, and this bitter satirist advised the Roman ladies to look for men among the gladiators and peasants. The people of cities divide themselves into classes, and these classes are generally exceedingly clannish. It is not considered good form to marry out of the class to which an individual may belong, consequently no new types of individuals are added to the class.

I have shown that luxury enervates the class that indulges in it. The people of this class intermarry among themselves, and if no new blood is added, in a very few generations examples of effemination and viraginity begin to make their appearance, due to enervation and consequent psychic hermaphroditism. We see daily on our streets, mild types of effemination in the cigarette smoking, soda-water-drinking young men whom the caricaturists consider their legitimate prey. The tailor-made, horsey, and loud-talking young woman is by no means infrequent—an example of mild viraginity. Effemination makes its appearance early in life. The boy likes the society of girls. He plays with dolls, and, if permitted, will don female attire and dress his hair like a girl. He learns to sew, to knit, to embroider, and to cook. He becomes a connoisseur in female dress, and likes to discuss matters pertaining to the toilet. He does not care for boyish sports, and when he grows older, takes no pleasure in the amusements and pursuits of his masculine acquaintances. He prefers to spend his time with women and engage in their employments and amusements. As the change in his psychic being becomes more developed and more overpowering, he will endeavor to approach the female in gait, attitude, and style of dress. I have seen mothers guilty of incalculable harm by fostering such inclinations in their sons. They think that such perversions of taste indicate gentleness and kindness, and induce their sons to continue in the practice of them, thus assisting atavism in

its baneful work. Effemination is a disease which taken at its inception, can generally be eradicated and cured. As soon as it is discovered the boy's surroundings should be changed. His mind should be directed into new channels and his dormant boy's nature aroused. Outdoor exercise and a free intercourse with companions of his own sex, should be made important factors in the treatment of an incipient effeminant. He should be carefully watched until his *vita sexualis* has been established. He should then be taught the dangers of youthful follies and indiscretions. A dandified man is always ridiculous, but when he adds to his foppery, effemination, he then becomes contemptible. Several years ago I had the opportunity of studying a pronounced effeminant. He is one of the best-known young men of a southern city, and is a leader in society. He took me to his "boudoir" and showed me his "lingerie." The words quoted are his own. His night-gowns were marvels of artistic needlework, and made by himself. His night-caps were "sweetly pretty," and one of them was a "perfect dream of beauty." On his bureau were all the accessories of a modern society woman's toilette, including rouge, powder, a complete manicure set, and numerous bottles of perfumes and toilet waters. In his wardrobe he had, displayed on forms, some six or eight corsets and chemisettes—"corset covers" as he designated them. This man's voice and manner of speaking are decidedly feminine; all the little mannerisms and affectations of a society woman being faithfully reproduced.

I understood from his associates that he is a splendid business man, and that not a breath of scandal has ever tarnished his good name. He was reared by his mother and never associated with boys until his sixteenth year. I understood from him, that she always treated him as a girl, and consulted him in all things pertaining to her toilette. He seemed utterly unconscious of his anomalous condition, and as his business associates are gentlemen, and his intimate friends are ladies, he may drift through life without a single jar to mar the serenity of his existence.

Viraginity is by no means an infrequent occurrence, and under its influence the unfortunate victims are guilty of startling vagaries. The recent case of Alice Mitchell, who killed Freda Ward, at Memphis, Tenn., is an example of pronounced viraginity. We see daily in the newspapers accounts of women who masquerade as men, and history abounds in like instances. The celebrated writer, Count Sandor V., was a woman who posed as a man, and who was in fact Sarolta (Charlotte), Countess V. "Among many foolish things that her father encouraged in her was the fact that he brought her up as a boy, called her Sandor, allowed her to ride, drive, and hunt, admiring her muscular energy." At the age of thirteen she ran away from school, where she had been sent by her mother, and returned home.

"Sarolta returned to her mother, who however, could do nothing, and was compelled to allow her daughter to again become Sandor, wear male clothes, and, at least once a year, to fall in love with persons of her own sex."

Mothers, early in life, though not from any sense of danger to their daughters, begin to eradicate the tomboy inclinations in their female children; hence the comparative infrequency of viraginity. The congenital viragint will always remain somewhat masculine in her tastes and ideas, but her inclinations and desires having been turned toward feminity early in life, she will escape the horrors of complete viraginity or gynandry. The victim of effemination, however, is saved by no such accidental forethought. The ignorant mother fosters feminine inclinations and desires in her effeminate son until his psychic being becomes entirely changed, and not even the establishment of his *vita sexualis* will save him from effemination. An only son, who is in the least degree neurasthenic, runs the risk of becoming an effeminant under the tutelage of a loving but ignorant mother who encourages his feminine tastes and inclinations.

In this article I have described only mild types of viraginity and effemination. In the more pronounced types of these singular examples of atavism or reversion, the victims commit the most unheard of and the most unnatural acts. Almost every case of effemination or viraginity can be cured if recognized and treated in its incipiency. The parents should be the physicians. They should keep a watchful supervision over their offspring, and as soon as any evidences of effemination or viraginity become apparent, treatment, both physical and psychical, should at once be instituted. Effemination has occasioned the downfall of many nations; let us guard against it with all our power. Let us train up our boys to be manly men, and our girls to be womanly women.—James Weir, Jr., M.D., Owensboro, Ky., in *Medical Record.*

Treatment of Gastric Ulcer.—Dr. Von Liebermeister (*Sem. Med.*, No. 50, 1893), recommends the following method of treating gastric ulcers (*American Medico Surgical Bulletin*):

The principal indication consists in allowing the affected organ as much rest as possible, and in reducing to a minimum the deleterious influence of the gastric juice on the ulcerated mucous membrane. Non-irritant food, which remains in the stomach but a short time, is prescribed; certain medicaments are, besides, administered with the view of neutralizing gastric acidity and stimulating the intestinal peristalsis.

Every morning before breakfast the patient drinks half a litre (say 1 pint) of warm water (35 40° C [95-104 F.]), slowly and in small quantities, in the course of 15 30 minutes; in it he takes each time a table- or teaspoonful of a mixture of 2 parts each of sodium bicarbonate and sodium sulphate, and 1 part of sodium chloride. The dose of this mixture is regulated so as to produce one or two liquid stools.

The patient should be abed while slowly ingesting this potion, and should not take any food for 1½ hours.

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In cases in which even a strong dose of the above should prove ineffective as a laxative, pills are prescribed containing extract of aloes, extract of colocynth, and powdered rhubarb, to be taken before going to sleep. These pills, can, as a rule, be dispensed with after some time.

This treatment is continued for about four weeks, during which period the food must be exclusively liquid, —milk, and bouillon with barley, rice, gruel, oats, fresh peas or beans. The milk must be boiled; it may be drank cold or warm, but always in small swallows. If taken with repugnance, or if not tolerated, a little tea or coffee may be added.

The laxative potion is discontinued after 4 weeks; if there should still exist constipation, the following is prescribed:

℞ Powdered rhubarb, - - parts 2.
Magnesia carbonate,
Sugar, - - - - aa part 1.
Pepermint oil, - enough to flavor.
M.
Sig. One or two teapoonfuls before going to bed.

When sufficiently improved the patient may take solid but easily digestible food; nevertheless, milk and soup must constitute the basis of nutrition for a long time (sometimes for years). Alcoholic beverages are strictly forbidden.

The treatment must be repeated, if the cure should not be complete after a month; but not before an interval of a month, except in case of relapses. If it is illy borne or fails to give a satisfactory result, Von Liebermeister resorts to silver nitrate in the following form:

℞ Silver nituate, centigrammes 15 (2½ grs.).
Distilled water, grammes 100 (3⅜ fl. oz.).
M.
Sig. One, gradually increased to four, tablespoonfuls in the morning, before breakfast.

After ingesting this solution, the patient should abstain from food for 1½ hours,—the diet remaining the same as before.

After a certain improvement has been affected by means of the silver nitrate, the treatment with the mixture of sodium salt may be tried again.

The dull gastric pain is combated by the application of cataplasms during the day, and of a Priessenitz compress during the night. In case of intense cardialgia, morphine is administered in a mixture or by hypodermatic injection.

In cases of gastrectasis, lavage of the stomach is resorted to in the morning, before the ingestion of the laxative potion.

Gastrorrhagia will require horizontal position and absolute abstinence from food. The patient should swallowed small pieces of ice, and take enemata of tepid chamomile infusion with 2-5 drops of laudanum. Morphine is administered, from time to time, per os or subcutaneously.

If hemorrhage should be abundant, hypodermatic injections of ergotin are employed.

Peritonitis from perforation will, of course, necessitate the use of opium and morphine in large doses.

A Case of Typhoid Fever Followed by Septicemia, in which Recovery Took Place After the Inhalation of Oxygen Gas.—Arthur Mason, M.R.C.S. Eng., L.R.C.P. London, in the *Lancet*, says:

A domestic servant, age twenty two contracted typhoid fever whilst away for her annual holiday. The course of the fever was normal, and, on the whole, distinctly favorable until Oct. 2, before which date the temperature had fallen for three or four days, and she had begun to take a small amount of solid food in the shape of custard pudding. On that day the temperature rose to 102° F., and the patient complained of much pain in the left thigh, which was tender to the touch at the upper part, but showed no signs of any definite trouble. A hot fomentation was ordered, and it was kept constantly applied, but on the two succeeding days the temperature continued to rise slowly, and the glands of the groin on the left side became enlarged and painful, whilst there was much deep seated tenderness in Scarpa's space, and considerable swelling in the upper third of the thigh. This was accompanied by sickness which, in spite of treatment, became more and more severe, till on Oct. 4, there was almost uncontrollable vomiting, only small quantities of iced champagne being retained, when recourse was had to rectal feeding. On Oct. 5, the temperature was 105° at 12 noon, being 103° in the evening. The general condition of the patient was much graver, the pulse being 140 and the respiration 60. The local trouble was somewhat improved; there was no trace of lung complication, but a few scattered coarse rales were heard over the chest. The tongue was very dry and leathery. She complained much of thirst and took champagne freely. The sickness had stopped. On Oct. 6, the temperature was 103°, rising to 104.6° in the evening. The swelling in the thigh had much diminished, and there was hardly any pain or tenderness. The breath was indescribably offensive and the tongue was very dry. The patient rambled a good deal in her sleep, and when awake her mental condition generally was peculiar; but she could be roused for short intervals by a question. On Oct. 7, the temperature rose at 8 A. M. to 106°, being accompanied by a severe rigor; slowly fell during the course of the next twenty-four hours to 101.4°, there being profuse perspiration. She took nothing by the mouth but champagne; the rectal feeding was continued, the injections being well retained. The pulse was 160. On the morning of Oct. 9, another rigor occurred, the temperature rising to 105°; but in the course of the day it fell to 100.4°. On Oct 10, after an unusually severe rigor, the temperature rose to 106.6° in the morning, as taken in the axilla, falling 3° during the day. The condition of the patient was apparently hopeless, the pulse being 173 and the respiration 84, and extremely shallow. The color of the face was pale and livid, with a slightly

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jaundiced appearance of the skin and conjunctivæ. Inhalation of oxygen was tried at 9 P. M., about half a gallon being administered slowly in the course of twen ty minutes. The pulse fell 30 beats during the administration and gained in strength, and the color of the lips and finger tips underwent a distinct improvement. The administration was repeated at 2.30 A. M. on Oct 11, the same quantity being again given. This was followed by the expectoration of a little bright blood-stained mucus. Shortly after the second inhalation a critical diarrhea set in, and in the succeeding twenty-four hours the patient passed eleven stools of a semi solid, black and horribly fetid character. The temperature was 101.4° and the respiration was 73. Oct. 12, the temperature fell to normal in the course of the day, and from this point nothing worthy of notice interfered with the progress of a rapid and satisfactory convalescence with the exception of a good deal of swelling of the left leg when the patient began to move about, and which had not entirely disappeared on Dec. 1, 1892.

REMARKS.—I have never yet heard of the employment of oxygen under the conditions about detailed, and it suggested itself to me mainly on the ground of the exceeding livid color of the patient and the rapidity of the breathing. One naturally hesitates to say how far the recovery was due to the remedy used, and how far to youth and its natural elasticity; but as far as I could judge, it certainly seemed to be the turning point of the case. The patient was apparently dying of a profound toxemia, and the oxygen supplied the stimulus required to throw off the poison. Under similar conditions I believe that arterial transfusion has been a suggested, if not an adopted, remedy. The above case seems to me to show that the inhalation of oxygen is a possible therapeutic agent worthy of trial in case of blood-poisoning, and certainly simple in its application. I should like to be permitted to add my sense of the devotion and ready self sacrifice shown by the nurse who was associated with me in this most exacting case.

Relations of Dyspepsia to Pulmonary Tuberculosis.—At the recent French Congress for the study of tuberculosis recently held in Paris, one of the subjects discussed was that of the relationship of dyspepsia to pulmonary tuberculosis (Boston *Med. and Surg. Jour.*)

Marfan has maintained in his thesis that the digestive disturbances of the phthisical bear the relation not of cause, but of effect; in other words, they are but one of the manifestations of the tuberculosis. Often the dyspepsia masks the tuberculosis. Marfan believes the initial dyspepsia to be caused by a "humoral state."

According to Hayem, whose paper attracted much notice, the gastritis of the phthisical is a common gastritis due to the ordinary causes of stomach inflammations. It is generally accompanied with retardation in the evacuation of the stomach and consequently with dilatation. It sometimes precedes, for several years, the appearance of the tuberculosis, and is only exaggerated at the outset of the phthisis in patients who take excitant drugs, or who adopt a regimen not adapted to the state of their stomachs.

The causes of the gastric affections of the phthisical are those of ordinary gastric affections, to wit: the abuse of tobacco and alcohol, errors in diet, etc. It is mixed gastritis, parenchymatous and interstitial.

In one case, Hayem found, at the autopsy, a general amyloid condition of the entire mucosa; in another, a necrosis due to thrombosis; exceptionally, he has met with a tuberculous ulcer.

A gastropathy of uncertain source begins early in life; it entails a state of general debility, and at a certain moment pulmonary tuberculosis bursts forth. The physician then institutes an active treatment based on super-alimentation and the abuse of medicaments.

Under the influence of this particular regimen continued for months, there supervene the symptoms of violent gastric catarrh; in other words, the "initial gastric syndrome" of Morfan. It is simply the exaggeration of a gastrophy which had existed for many years, sometimes fifteen or twenty years before the appearance of the pulmonary accidents. Under a suitable dietary regimen, and the suppression of medicines, these gastric symptoms vanish.

When the attending physician discards the administration of irritant medicines and prescribes nourishing, easily-digested food, he will, even in febrile cases, see the condition of the stomach improve.

The tuberculosis at the onset, then, does not make the state of the digestive organs evidently worse. On the contrary, there are few diseases which so rarely affect the stomach. One is often astonished at the digestive capacity of the phthisical, who will eat more nutritious food than a well man.

In coucluding, Hayem said that with the exception of rare lesions, ulcerations, amyloid degenerations, etc., the gastritis of the phthisical is of the common kind.

It is sometimes latent, and is not diagnosticated before the appearance of the tuberculosis. It should, nevertheless, be a subject of preoccupation by the medical attendant, for this gastritis may end in grave gastropathies, and open the door to pulmonary tuberculosis. In hospital patients it would seem that chronic alcohol ism is a frequent cause of gastritis.

One of the best means of warding off pulmonary tuberculosis in the predisposed consists in treating the gastrophy.

The proper medication addressed to the digestive tube may, perhaps, in some subjects arrest tuberculosis at the onset.

Purulent Cystitis.

℞ Phenosalyl, - - - - - - - - fʒijss.
Aq. destillat., - - - - - - - - - Oj.
M.
Sig. Inject into the bladder twice a day.

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BOOK REVIEWS

A Practical Treatise on Diseases of the Skin. For the Use of Students and Practitioners. Third Thoroughly and Enlarged Edition. By James Nevins Hyde, A.M., M.D, Prefessor of Skin and Venereal Diseases, Rush Medical College, Chicago, Etc. [Philadelphia: Lea Brothers & Co.

This work of 802 pages is a most excellent treatise on dermatology; it includes everything essential up to date and is written in clear and comprehensive lan guage. Thirty-five new diseases have been added in this edition. The chapter on Tuberculosis has been re written and considerably enlarged, so as to bring it in harmony with modern bacteriology and histology. Among the important chapters added are Pityriasis Rubra Pilaris, Keratosis Follicularis, Actinomycosis, Leucokeratosis Buccalis, Xanthoma Diabeticorum. Among the chapters of minor importance are Savill's Disease, Scarlatiniform Erythema, Acauthosis Nigricans, Angioneurotic Edema, Acromegalia, Alopecia Follicularis, Parasitic Forms of Eczema, Several Varieties of Gangrene of the Skin. The original illustrations added in this edition consist of five plates and twenty-two woodcuts. The illustrations, some of them black and some colored, are very good and plain. The type is large and clear. It is a work which we can conscientiously recommend to every practitioner and student.

Lessons in Physical Diagnosis. By Alfred L. Loomis M.D., LL.D., Professor of Practice of Pathology in the University of the City of New York. Tenth Edition. Revised and Enlarged. [New York: William Wood & Co.

This comprehensive work contains twenty lessons, 278 pages, on the essentials of physical diagnosis, and is an excellent guide to the student of this branch of medicine. The section on the "Physiological Action of the Heart" and the lesson on the "Examination of Urine" have been entirely re-written and a new lesson on "Clinical Microscopy" has been added in this edition. The name of the author alone is sufficient to recommend the book to every student in the land.

Essentials of Minor Surgery, Bandaging and Venereal Diseases. By Edward Martin, A.M., M.D., Philadelphia. Pp. 166. 1893. [W. B. Saunders. St. Louis: J. H. Chambers & Co. Price, cloth, $1.00.

This is the revised and enlarged second edition of No. 12 of Saunder's Question Compends. It contains a good resume of those subjects which were formerly unfortunately learned after the student had entered upon the practice of his profession. Every school of medicine, which is abreast of the times, has an instructor, whose hours are devoted to practicing, bandaging, surgical operations, etc. As an auxillary to this, and to enable the student to prepare himself for the work of the class room, the handy little volume will be serviceable.

Syphilis in the Innocent. (Syphilis Insontium). Clinically and Historically Considered with a Plan for the Legal Control of the Disease. By L. Duncan Bulkley, A.M., M.D., Professor of Dermatology, New York Post Graduate Medical College; Physician to the New York Skin and Cancer Hospital, etc. 8vo., about 350 pages. [New York: Bailey & Fairchild.

The attention of the profession is called to this forthcoming work to which was awarded the Alverenga Prize of the College of Physicians.

It contains a complete presentation of the subject of the innocent acquiring of Syphilis in social and industrial life, and also professionally, with histories of over one hundred personal cases of extra-genital chancre.

Tables are given of all the Epidemics of Syphilis, and also one including over 9,000 cases of extra-genital infection, of which the data are found in the Analytical Bibliography. This latter covers over 150 pages, with references to cases reported by several thousand writers, and in the Synopsis of Facts and Literature these are all analyzed.

It is not too much to say that this is one of the most exhaustive works which has ever been made of any one medical subject; but it is also intensely practical, and places the matter of the legal control of Syphilis upon a different basis from that commonly recognized.

The Ambulance Street Car.—The application of the modern system of ambulances to electric street railways has been attempted in St. Louis (N. Y. *Med. Jour.*). It results in the establishment of an emergency ward on car-wheels. The springs of the car are so made as to reduce to a minimum all the jar and shock that are apt to occur to the patient during transit. As three large hospitals and the chief dispensary of the city are located along the line of the electric roads, it will be convenient to convey the sick and injured from central districts, as well as outlying ones, by means of the electric car ambulance. The ordinary city ambulances, moved by horse power, will still be required to supplement the work of the car ambulance. Every electric car company in our cities should include an ambulance as a part of the original plant for this reason, if for none other, that a large casualty list is apt to accompany the establishment of electrical rapid transit in any crowded district. The companies should be prepared to help in the relief of those unfortunate citizens who suffer at the hands of inexperienced motormen and deranged machinery.

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MEDICAL SOCIETIES

Tri-State Medical Society of Alabama, Georgia and Tennessee.

The fifth annual meeting was held in the Unitarian Church, Chattanooga, Tennessee, October 17, 18, and 19, 1893.

FIRST DAY—TUESDAY, OCTOBER 17, 1893. MORNING SESSION.

Meeting called to order by President, Richard Douglas.

Prayer by Rev. John A. Stevens.

A new constitution was read by the Secretary and made a special order for Thursday morning.

A paper by J. W. Russey, of Chattanooga, was read, entitled:

TREATMENT OF PUERPERAL MASTITIS.

Compression of more general utility than any simple measure, both prophylactic and curative, To be efficient for former purpose, must be used early after labor. The chest binder of Dr. Guiterras a most satisfactory means of applying pressure. If abscess forms, pus should be evacuated early and perfectly. Washing the abscess cavity preferable to drainage tubes. If drainage is necessary, horse hair to be preferred to rubber tubing Great care should be taken in selecting point for incision, if circumstances admit, on account of scar in cosmetic point of view.

W. G. Bogart said that mastitis could be prevented by proper prophylaxis. The breast is liable to injury by manipulation. He had found only one pump satisfactory by which the breast is steamed at the same time that the milk is drawn out. In the early stage, try abortive treatment; if abscess threatens, poultice, later, incision, cleansing with peroxide of hydrogen and pack with iodoform gauze.

G. A. Baxter—The chief point is the free exit of milk; preceding this, the excessive secretion of milk produced by improper diet. The ordinary diet should be used—a liquid diet is especially improper. As soon as there is any hardness of breasts, annoint them with warm castor oil.

G. W. Drake believes in medical treatment, the internal administration of bichloride of mercury for the revulsive effect.

Richard Douglas called attention to the anatomy of the gland. Prof Dugas is entitled to the credit of originating the only rational treatment—that by pressure. The cause is due to the presence of micrococci. The milk forms a favorable nidus for their development.

J. A. Goggans, Alexander City, Ala., read a paper entitled:

TREATMENT OF THE DISEASES OF THE UTERINE APPENDAGES,

and presented specimen of ovaries.

These cases all come from pre-existing disease of the uterus, generally endometritis. The treatment of this condition was given: 1. By local treatment. 2. Amputation of the cervix. In all diseases of the uterine adnexa, rest and abstinence from sexual intercourse necessary. The three principal points of diagnosis in disease of the uterine adnexæ are: 1. Repeated attacks of peritonitis. 2. Repeated hemorrhages. 3. Pain. Indications for operation: 1. Those attending pelvic peritonitis, accompanied by tortuous and distended tubes, which may usually be felt in Douglas' pouch, behind the uterus. This condition may be preceded by the history and symptoms of an abortion, a gonorrhea, or a tubal pregnancy. 2. The physical signs of enlarged and tender ovaries due to chronic abscess 3. The physicsl signs of prolapsed and tender ovaries, accompanied by irregular hemorrhages and incapacitating pains. 4. Some few cases of dysmenorrhea as the principal symptom, with a possibility of its being kept up by chronic disease of the ovaries and tubes. 5. Where hemorrhage is the principal symptom, accompanied by the ordinary signs of grave pelvic disease. 6. In a few cases of general peritonitis, preceded by the symptoms of rupture of a pre existing pelvic abscess, ovarian abscess, pyo-salpinx, or abscess in the appendages developed during the progress of puerperal septicemia and just so long as endometritis existed, there could be no tendency on the part of the ovaries and tubes to recover. He distinguished endometritis clinically as simple gonorrheal and septic. Treatment given was constitutional, generally followed by local treatment, and especially tampons of 10 per cent sol. ichthyol in boro glycerine, either with or without previous dilatation Said that this plan of treatment deserved serious consideration before such patients were subjected to the dangers of laparotomy.

Richard Douglas indorsed the position of the author as to the indications for operation, but each case must be decided on its own merits. Removal of appendages will not cure hemorrhage from the uterus, the proper treatment of which is divulsion of the cervix.

P. L. Brouillette was surprised that in the discussion of the subject, electricity had not been mentioned. In his experience many of these cases had been cured by the use of this agent without curetting or removing the ovaries.

H. Berlin thought it a mistake to remove the uterine appendages for hemorrhage. Electricity applied with positive pole inside the womb will control hemorrhage by destroying the mucosa if a strong current is used It would be impossible for the woman to conceive after this.

Dr. Brouillette objected that the Farradic current could stop the hemorrhage.

Dr. Berlin said that his experience was only with the galvinic current which was generally used.

G. W. Drake said that most physicians, had not been educated so as to use electricity intelligently. It might relieve hemorrhage by reflex action.

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Dr. Brouillette thought that electricity should be tried before any operation was advised.

Dr. Goggans, in closing the discussion, said he was not in favor of removing the ovaries for mere symptoms —only for organic disease. Most of the general practitioners who use electricity fail to make a differential diagnosis. In the cases presented the conditions show that no cure could have resulted from the use of electricity.

R. M. Harbin presented a case on which he had performed tracheotomy for membranous croup.

Afternoon Session.

On motion, a vote of thanks was tendered Mrs. Coleman Duncan for a floral piece of Mareschal Neil and La France roses presented the society.

R. M. Harbin. Calhoun, Ga., read a paper entitled:

Membranous Croup, with Report of Cases Treated by Tracheotomy.

Conclusions —1. Membranous croup is almost invariably fatal without surgical treatment, and with medicinal treetment but little can be hoped for. 2. Any hope for an expectant plan of treatment is nil, and for the few cases that recover without surgical treatment don't demand a consideration. 3. Tracheotomy is a justifiable surgical precedure, and should be performed in all cases where our therapeutic resources have been exhausted and the patient is in danger of suffocation. In hopeless cases it affords a chance for recovery or promotes euthanasia. 4. Statistics would be better if infectious diseases were eliminated, as diphtheria, etc. 5. Tracheotomy keeps the patient alive until the pseudo membrane resolves into a muco-purulent liquid and is expectorated through the tube. 6. In all human certainty, the cases reported would have died without the operation. 7. The importance of after treatment in keeping tube moistened with lime water and the room at an equable temperature. 8. Tube should not be removed until purulent nature of sputa ceases, which is about eighth day. 9. A lack of instruments is no excuse for the non performance of the operation, as a tube only is necessary in addition to general operating instruments.

J. R. Rathmell emphasized the uncertainty of the diagnosis between diphtheria and membranous croup, and the almost certainty of death.

W. F. Westmoreland thought the paper valuable, as it called attention to the value of surgical interference. The surgeon was generally called too late. Tracheotomy, in itself, is not a dangerous operation. He had used cords, fastened in the edges of the wound and tied behind the neck, and thought this practice resulted more favorably than with the use of the tube.

H. B. Wilson, while in the Children's Hospital, N. Y., treated twenty-two cases of diphtheria, and all of these died except two, in which tracheotomy had been performed; in another epidemic, out of forty cases, there were but few deaths.

Frank Trester Smith thought the operation of little danger. In the statistics, death is ascribed to the operation instead of the cause for which it was performed. Where tracheotomy was performed for foreign bodies, the statistics are good. The operation adds but little to the danger of the patient.

H. Berlin said that experiments on dogs in which croup had been artificially produced, showed that the effects of early operation were good. There was little danger from the operation itself.

G. A. Baxter read a paper entitled:

Treatment of the Omentum in Hernia Operations,

in which he advocated the removal of the redundant omentum and reported a case, in which a very large hernia consisting only of omentum was removed, weighing four pounds. The omentum was shown, also, the patient.

W. F. Westmoreland thought the omentum could be removed in toto without effecting the patient at all, unless it might be from hemorrhage or adhesions. And if any difficulty in reducing omentum, it should be resected, or if there is any suspicion that the vitality is effected.

E. E. Kerr asked if the tumor was omentum, or a growth from the omentum.

R. M. Cunningham thought the specimen looked like a growth.

W. F. Westmoreland said that in cases of hernia of the omentum the tissue would hypertrophy.

In answer to a question, the patient stated that the growth had enlarged suddenly.

H. Berlin stated that in the cases where the omentum protruded as here, the structure was changed and it became a lipomatous growth.

J. A. Goggans agreed with Dr. Berlin as to the pathology of the case. The omentum should be cut off whenever it protrudes.

Richard Douglas raised the point that the stump should be tied in sections, not as a whole. He preferred silk to catgut. Kangaroo was better fitted for sutures than for ligature.

Dr. Baxter, in closing the discussion, said that the tumor was composed of areolar tissue, filled with fat. The kangaroo tendon was not too stiff for tying the stump.

J. R. Rathmell, of Chattanooga, read a paper entitled:

Serious and Watery Discharges During Gestation, Their Source and Significance.

The author believes that the profession has been mistaken in accepting the theory that these discharges are from the amniotic sac. Rupture of the sac is always followed by the expulsion of the fetus. There are two other sources from which these discharges can come; 1st, from the cervix; 2d, from the decidua. Cases are related from the writers observation, illustrating all these sources.

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J. B. Cowan said the discussion of this question was

interesting, but not satisfactory. In one case in his experience he thought the discharge from a case of hydrosalpinx. There had been an occasional gush of water after the pregnancy.

Richard Douglas said that hydrorrhea is frequently met with in women who have had syphilis or gonorrhea. When the amniotic sac is opened, it is followed sooner or later by expulsion of its contents. If the fluid is amniotic, it will contain urine; otherwise not.

G. A. Baxter related a case in which there was a large flow of amniotic fluid following a fall. He had delivered the woman of a dead child, five months later. A partial rupture is not always followed by expulsion of the fetus. He thought a chemical analysis would determine whether the fluid was amniotic.

Geo. R. West stated that a serous discharge from the cervix might be from a cancerous condition.

J. R. Rathmell, in closing the discussion, thought that it might be possible in the early months of pregnancy that the discharge might come from the tubes. None of his cases ever suffered from gonorrhea.

Night Session.

A paper was read by R. M. Cunningham, Birmingham, Ala., entitled:

Recent Observations of Croupous Pneumonia, with Special Reference to Prophylaxis and Treatment.

This paper was largely statistical, based on an epidemic among the convics at Pratt Mines, concluding as follows:

1. An unusually severe, general and fatal endemic of croupous pneumonia at this prison, coming on without apparent cause and ending, practically, abruptly.
2. That more than double the percentage of negroes was attacked when compared with the whites.
3. That it affected alike all ages.
4. That it attacked the robust and strong the same as those in more or less bad physical condition.
5. That it affected those who worked outside the same as those that worked inside the mines.
6. That an unusually large number was suddenly and violently attacked.
7. The pulmonary tissue involved.
8. The unusually high temperature, fast pulse, and respiration.
9. The low mortality considering extraordinary severity of the endemic, and the character of the patients.

For prophylaxis, disinfection was tried by washing the cells with a solution of bichloride and steaming the bedding. The epidemic abruptly terminated and there have been no cases since, the author believes as a result of the disinfection. Treatment consisted in the administration of stimulants and antipyretics in a majority of cases. For shock, a solution of common salt was injected hypodermically (hypodermoclysis), one dram to a pint of sterilized water. This he believes will prevent antimortem clots, and is a remedy for shock. Specimen of antimortem clots were presented. He concluded strychnine was the best stimulant; baths the best antipyretic. Quinine and antipyrine have no place in the treatment of the disease.

W. L. Nolan could not see wherein filling up the system with a saline solution would benefit the patient.

The statistics show the death rate to be about the same under different lines of treatment.

G. A. Baxter believed the remedies of the past of little value and Dr. Cunningham has made a discovery of value to the world. It was the chloride of a sodium which affected the condition of the shock, and the filling the tissues with the solution.

P. L. Brouillette wanted to defend his favorite treatment, with carbonate of ammonia, which had been his sheet anchor. In thirteen years, treating perhaps fifty cases a year, he had never lost a case; and regarded the disease as a mild disorder.

Willis F. Westmoreland thought that the paper showed that the use of the saline solution not only buoyed the patient temporarily, but was of permanent value. It probably has some effect on the blood result.

H. Berlin thought perhaps Dr. Cunningham's cases were not simply croupous pneumonia, but that other micro-organisms might be present. Ordinarily, saline solutions are used to fill up the vessels when they are empty from loss of blood.

Dr. Cunningham thought that the chloride solution would supply something to the blood in which it was deficient. Statistics show that the mortality in this disease was enormous.

A paper was read entitled:

Some of the Diseases of the Female Urethra,

by J. C. LeGrand, of Anniston, Ala. The paper related cases in which relief had been experienced from treatment, and others in which no treatment was of any avail.

J. A. Goggans could not add anything to the treatment. He had used an infusion of pterus aquilina (brake fern) with good effect. We should look for disease of neighboring fistula.

H. Berlin had tried every remedy. The only remedy in some of these cases is to produce a vesico-vaginal fistula.

Richard Douglas said that in the diagnosis between organic and functional diseases inspection was necessary. Urinary disorders may be produced by abnormal conditions of the surrounding structures. The treatment suggested by Dr. Berlin is the only rational method. The relief is complete and instantaneous. These cases can retain the urine partially. The opening is not closed for six months or a year.

J. B. S. Holmes related a case in which the operation was a success.

[To be continued.]

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NOTES AND ITEMS

The Athletic Life.—Sir Benjamin W. Richardson in a lecture before the Athletic Association of Birminghom (*Lancet*), limited the period of the athletic career to a shorter course than is generally accepted—namely, from the eighteenth to the thirty-sixth year; but it should be understood that he meant by this the true athletic existence, in which reallv active contests can be carried on. Contests of a serious kind should not be attempted until the body approaches maturity and should not be continued after the time when the body comes near to middle age. A point was raised whether every person can be transformed under any trainer or under any system of training into a veritable athlete—that is to say, into one who can properly enter into a contest. It was admitted at the end of the discourse that a physically uncultivated nation might have its strength easily doubled by the introduction of a sound system of athletisism; but it was contended that among the members of communities there were always a number who, although benefitted by physical exercises, could never become athletes and who ought never to attempt to reach the position. A distinction was thus raised as between common physical exercise and the trained exercise intended for the purposes of competition. A speaker, Mr. Mathews, in moving a vote of thanks to the lecturer, explained that he, a Swiss mountain climber, kept up his climbing feats although he was sixty years of age—viz, twenty-four years of age beyond the period that had been specified. But that is not athleticism, was the reply; it is common exercise that requires no trainer, and, although it is risky, it does not come into the sphere of the athletic life. Here is a question that opens up a wide field of controversy among those who have made athletic pursuits a part of their practical studies. Is there a line of demarcation between athletic exercise and systematic common exercise? The answer, we presume, will be that there is such a line of demarcation, and that the term 'athleticism' is only applicable to pursuits where competition comes into play and where perhaps a course of training is required for success. This evidently was Sir Benjamin Richardson's view, and he mentioned, as the qualities to be developed by such training, precision, decision, presence of mind, and endurance. These qualities are of a mixed sort, being partly physical and partly mental, but their interrelation is very intimate, and it is easy to see that their joint employment must result in the perfection of athletic prowess, in whatever department of athleticism they are displayed. At the same time the four qualities had not, in the lecturer's eye, an equal value; mental endurance, the other qualifications being in fair condition, stood first. A comparatively feeble development of body could be made effective by mental endurance, and some most important physical difficulties could be overcome by strength and endurance of will aiding and sustaining endurance of a physical kind. Several striking examples were supplied in which mental endurance carried the day, and it was shown that pure physical accomplishment, great as it might be, was of little avail when not backed up by the strength of the natural and commanding mind. In other words, mere strong savagery could not make either a nation or a man physically great; there must be that inborn faculty or quality which, though not measurable, nor to be weighed, nor in substance visible, becomes in action the essential virtue, the power that wins—the same virtue that sustains the orator, the writer, and the discoverer, and that belongs in the highest degree to the highest civilization.

The Lesson to Physicians from the Infectiousness of Tuberculosis.—The Section of Hygiene of the late Pan-American Medical Congress adopted the following resolution unanimously (*American Lancet*):

Resolved, That tuberculosis causes more deaths than any other disease; that it is known to be communicable, especially to persons living in houses and shops with consumptives. Therefore the attention of national, State, and municipal authorities should be directed to the necessity for controlling the dissemination of the disease: 1st, by notification by physicians and householders; 2d, the regulation of the residences of the tubercularized; 3rd, by controlling their movements so far as possible; and 4th, by the establishment of the hospitals and homes for the infected poor.

If physicians believe the sputa of the tuberculous jeopardizes the healthy, they should publish this knowledge to the public, and do it with such persistence and force that all may be compelled to listen and heed. They should also point out the methods by which such dangerous sputa may be rendered perfectly harmless. Nor should they rest until means have been provided for the education of succeeding generations to this important knowledge.

Do physicians believe that the meat and milk of tuberculous animals often contain the infectious substance and produce the disease in such as consume the same? Then should they unite and demand that the meat and milk be regularly inspected, and the affected animals destroyed.

If we grant that tuberculous sputa may infect a habitation, then we should insist upon the immediate destruction of such sputa and the thorough disinfection of the house.

Do physicians believe that an injured lung or other exposed organ is liable to be infected with tuberculosis by exposure? Then they should insist on removal of the tuberculous from the wards of the general hospital.

Do physicians believe that a tuberculous patient is the center of infection? Then should they advocate the establishment of special consumption hospitals.

All physicians know that but few once infected with phthisis ever recover, hence the importance of preventing the infection if possible. From this standpoint it would seem the clear duty of every lover of his race to

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urge in season and out of season all practical measures for preventing infection by tuberculosis. The public benefits from such a general movement on the part of all physicians would be simply incalculable.

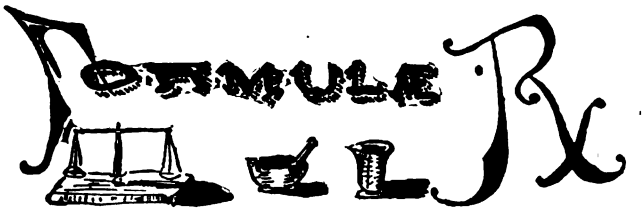
Dr. Shakespeare, in the *Hygienic Gazette*, sounds the battle cry, and to it we are indebted for some of the foregoing suggestions.

The Sort of Athletics for the Building of Strong Men.—Athletics have gained a strong hold upon college men (*American Lancet*). In fact, one hears more in the newspapers about Harvard's and Yale's athletic clubs than about their bright scholars. Many other colleges have won a certain notoriety by the success of their athletic clubs. A few years ago the writer knew a boy bright in scholarship, true in his manly instincts, noble in all his conduct. He was fond of athletics, and won distinction in Yale both as a scholar and as an athlete. But shortly after his graduation he was attacked with a fatal disease of the lungs. For his athletic work large lungs were needed, but when he dropped such work the lungs in their degeneration fell an easy prey to disease, and the world lost the service of one of the noblest of spirits. Not long since, on a visit to a college whose students indulge in foot-ball, the writer observed that many had effusion into the knee-joint. He was told this was the "foot-ball knee." At least one example was observed in which this disease finally necessitated the amputation of the leg.

"Base-ball fingers" have become quite a common deformity—one which cripples in many ways in most pursuits of life.

No sort of athletics compensates for bodily deformities. Every physician is familiar with cases in which over-development of muscles in the training for certain games has resulted disastrously. Excessively developed muscles may be good for show, but they are not good for healthy life, especially in brain workers. Athletics for competitive feats of strength and endurance are pernicious, illogical, and dangerous (Lydston). It were far better for the average boy or man to be content with perfect control and excellent nutrition of muscles of moderate development. Strong men are not best constructed by the socalled perfect training.

Brain-workers and those who lead sedentary lives are unwise in attempting to become general athletes. That sort of athletics is best which (1) is free from serious danger to life or limb; (2) is natural and pleasing to the individual taking it; (3) promotes a healthful flow of blood through every portion of the body, the more equably the better; (4) is regular as is the hour for meals and sleep; (5) permits cheerful companionship; (6) does not seriously disturb the ordinary duties of life. In short, those athletics are best for the student which are subordinated to his work as a student and the part he expects to take in after-life. Base-ball, foot-ball, lawn tennis, as friendly games for simple exercise, are well enough, but when entered into "to beat" they sadly lack the features needful to commend them to the thoughtful physician.



Whooping-Cough.

℞ Antipyrine, - - - - - - - - - ℥ss.
Tinct. belladonna, - - - - - - fℨss.
Elixir glycyrrhizac, - - - - - fℨiv.
M.
Sig. Teaspooful every two to four hours.

℞ Bromoform, - - - - - - - - drops, xx.
Neurosine, - - - - - - - - fℨss.
Tinct. lobeliæ, - - - - - - - fℨss.
Syr. aurant., - - - - - - q. s. ad fℨij
M.
Sig. Teaspoonful three to four times a day.

℞ Sennine, - - - - - - - - - ℈j.
Cocain. muriat., - - - - - - - gr.v.
Sacch. pulv., - - - - - - - - ℈ij.
M. F. pulv. Divide in chart No. 12.
Sig. Blow one powder into nose with insufflator every three hours.

Chronic Rhinitis.

℞ Sodii boratis,
Sodii bicarbonatis, - - - - - aa ℥j.
Sennine, - - - - - - - - - ℥ij.
Aq. destillat, - - - - - - - fℨiv.
Glycerin,
Listerine, - - - - - - - aa fℨss.
M.
Sig. Use as a spray.

℞ Pulvis aluminis, - - - - - - - ℥j.
Sennine, - - - - - - - - - ℥ij.
Potassii chloras, - - - - - - ℥j.
Aq. rosæ, - - - - - - - - fℨv.
Glycerin, - - - - - - - - fℨj.
M.
Sig. Use with a spray three or four times a day.

℞ Syrup hydrojodic acid (Gardner), - - - fℨvj.
Sig. Teaspoonful three times a day.

Acne.

℞ Sennine, - - - - - - - - - ℥j.
Zinc. oxyd. pulv.,
Bismuth subnitric, - - - - - aa ℥ij.
Balsam. Peruv., - - - - - - fℨj.
Vaseline, - - - - - - - - ℨjss.
Lanoline, - - - - - - - - ℨss.
M. F. ungt.
Sig. Apply night and morning.

Anemia and Chlorosis.

℞ Lig. potass. arsenitis, - - - - - fℨss.
Dioviburnia,
Elixir Nutrans, (A. W. & Co.), - - - aa fℨiij.
M.
Sig. Tablespoonful three times a day, after meals.

Chronic Constipation.

℞ Elixir Six Aperiens (Walker-Green's), original bottle.
Sig. Teaspoonful to a tablespoonful at bed time and in the morning.

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Asthma.

℞ Tinct. lobeliæ, - - - - - - - - fʒiij.
Neurosine, - - - - - - - - - fʒj.
Spirit eth. comp., - - - - - - fʒss.
Syrup. simpl., - - - - - - - - fʒiij.
M.
Sig. Dessertspoonful in water every hour or two during paroxisms.

Justifiable Prevention of Conception.

℞ Sennine, - - - - - - - - - gr.vj.
Cocoa butter, - - - - - - - - - ʒj.
Ol. olivar., - - - - - - - - - q. s.
M. F. suppositor.
Sig. To be introduced high up into the vagina.

Chronic Malaria.

℞ Elixir Six Iodides (Walker-Green's), - 1 qottle.
Sig. Teaspoonful three times daily shortly after meals and never on an empty stomach.

Diphtheria.

℞ Hydrarg. chlorat. mite., - - - - - - gr.ij.
Salolis, - - - - - - - - - - ʒj.
Sacch. alb., - - - - - - - - - ʒss.
M. F. pulv. Divide in doses No. xx.
Sig. One powder every hour.

℞ Sennine,
Lact. sulphuris, - - - - - - - aa ʒj.
Sodii benzoas pulv., - - - - - - - ʒij.
M.
Sig. Apply with insufflator.

Dysmenorrhea.

℞ Tinct. piscid. erythrin., - - - - - fʒiv.
Dioviburnia, - - - - - - - - fʒiv.
M.
Sig. One to two teaspoonfuls.

Chorea.

℞ Potass. iodid., - - - - - - - ʒiij.
Neurosine, - - - - - - - - fʒiij.
Sodii chloride, - - - - - - - ʒv.
Solut. Fowler's, - - - - - - drops, xxx.
Aq. dest.,
Syr. simpl., - - - - - - - aa fʒij.
M.
Sig. Tablespoonful in the morning in a cup of milk.

Rheumatism.

℞ Sodii salicylatis, - - - - - - - ʒij.
Lithii salicylatis, - - - - - - - ʒj.
Potassi iodidi,
Potassi acet-tis, - - - - - - aa ʒij.
Fl. extr. cascar. sagrad., - - - - fʒij.
Aq. menth. pip.,
Syrup. aurant., - - - - - - aa fʒij.
M.
Sig. Teaspoonful four times a day.

Gonorrhea.

℞ Morph. muriat., - - - - - - - gr.j.
Sennine, - - - - - - - - - gr.xx.
Zinc. sulfocarbolic., - - - - - - gr.x.
Hydrarg. bichlorat. corrosiv, - - - gr.ss.
Hydrogen Peroxide (Marchand),
Aq. destillat., - - - - - - aa fʒiv.
M.
Sig. Use as an injection.

For Many Years we have prescribed McArthur's Syrup of the Hypophosphites with entire satisfaction.

You Will no Doubt observe that Cod-Liver Glycerine is not a preparation of cod-liver oil, but a product of the oil, and a summer as well as a winter remedy.

We Call the Attention of our readers to the new advertisement of Antikamnia in this number. The firm gladly sends samples free to physicians who will furnish their address.

The 'Prescription" states that Glycozone (Marchand) will stop pregnancy vomiting every time. It must be given in tablespoonful doses, mixed with three tablespoonfuls of water, immediately after meals.

The Animal Extracts prepared according to Dr. Hammond's formula, in his laboratory at Washington, under his own supervision, can now be obtained from the Columbia Chemical Co., 20 South 5th Avenue, New York City.

Thymoline Soap speaks for itself, and has made friends wherever it has been used. To convince yourself write for sample, which will be mailed free to our readers by mentioning the REVIEW. Address Hall & Ruckel, New York City.

Dr. M. H. Henry, New York, says: "When completely tired out by prolonged wakefulness and overwork, Horsford's Acid Phosphate is of the greatest value to me. As a beverage it possesses charms beyond anything I know of in the form of medicine."

A. C. Bernays, M.D., Professor of Surgery, Marion-Sims College, St. Louis, Mo., writes as follows to the Dios Chemical Company: " * * * I have used Sennine in a great many cases and can recommend it conscientiously. Send one-half dozen to the City Hospital at once."

Salo-Sedatus the Best.—Dr. B. F. Thorpe, of Westfield-Mass., says: I am sure it is not extravagant to say that Salo. Sedatus is the finest remedy of the kind ever brought to the notice of the profession. When I say this I speak from experience, as I have used it with the most satisfactory effect; and I have also used all of the most popular and extolled fever and pain remedies in the market besides. It is not a depressant to the heart and circulation, and its antiseptic properties, with its power to influence the secretions, puts it beyond any of them in therapeutic efficiency.

Dr. C. O. Wildasin, of Springfield, Ohio, writes as follows to the Dios Chemical Company: I take great pleasure in recommending to my brother physicians your Dioviburnia and Neurosine. I have used them in two cases of Menorrhagia, and have been more than gratified with their action. I use them in the following manner:

℞ Dioviburnia, - - - - - - - - ʒij.
Neurosine,
Aquæ, - - - - - - - - aa ʒj.
M.
Sig. Teaspoonful in wine glass one-half full of water once in three hours.

This is a very valuable prescription for Menorrhagia where the patient is very nervous and weak from loss of blood. I shall continue to use the remedies, and hope you will rush the order I gave your representative.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

A Case of Malignant Syphilis Resulting in Death.

BY A. E. ROUSSEL, M.D., PHILADELPHIA,

Lecturer on Physical Diagnosis and Clinical Medicine, Medico-Chirurgical College; Physician to the Howard and to the Southwestern Hospitals; Consulting Physician to the Temporary Home for Young Men, etc.

J. P., born in France, aged forty years; chef. Good family history and excellent health (never having been sick since childhood) until the appearance of a chancre twenty-two days after exposure, which soon took upon itself a phagedenic character, and was shortly followed by induration of the inguinal glands.

Nine days after he first noticed the initial lesion the patient was suddenly confined to his bed with all the symptoms of an acute attack of rheumatic fever, and was, indeed, so treated by his physician for a period of four weeks. At the expiration of this time, the disease being apparently no better, the doctor was discharged and I was called in to the case.

After a careful examination I discovered a suspicious eruption on the body (roseola), and obtaining the above history verified the presence of the chancre which had not yet thoroughly cicatrized and bore evidence of its destructive ravages.

The pains complained of were not solely localized to the joints, which were, however, hot and slightly swollen, but were also particularly severe in the long bones of the leg and characterized by their nocturnal exacerbation.

Examination of the internal anterior surfaces of the right tibia in its upper third revealed the presence of a small tumor, intimately connected with the bone. It measured 5½ centimetres in its transvere diameter by 4½ centimetres in length, and projected to the extent of about 1 centimetre at its most salient part, but the edges were insensibly lost in the surrounding tissue. To the touch it was almost as hard as the bone itself, and was surrounded neither by edema nor peripheral inflammation, and skin covering the part was both healthy and mobile.

The patient claimed to have noticed its presence for about ten days, but was certain that it was at no time attended by external evidences of inflammation, and thought that its growth was most rapid at the onset. The localized pain, which dated from its beginning was extremely lancinating, but paroxysmal in character and greatly increased by the slightest movement.

The fever at this time was rather quotidian in character, the morning temperature averaging 99 5°, and rising in the evening to about 103°, unaccompanied by chill but by an intense cephalgia which continued for a period of three or four hours each evening, after which a profuse perspiration took place.

Under the mixed treatment the case rapidly improved and the patient was able to resume his occupation in two weeks time. The growth in question slowly diminished in volume and had practically disappeared in about one month with the exception, however, of slight permanent thickening at the crest of the tibia, which remained the seat of occasional intermittent pains.

Three weeks later (about ten weeks after the appearance of the chancre), during office treatment my attention was called to the sensation of pain referred to the roof of the mouth during the act of eating.

An examination of the part showed a considerable amount of brawny swelling, together with a deep, irregular, yellowish ulcer near the median line, about 2¼ centimetres in size, and surrounded by a line of inflammatory redness. A few days afterward the ulceration in question was noticed to have spread considerably and had apparently invaded the deeper structures.

Notwithstanding all local treatment directed to the part in conjunction with internal medication, the destruction of tissue continued until the bone itself became affected. About this time the patient was seen by Dr. William G. Porter in consultation, but in spite of our united efforts necrosis of the hard palate, as well as of the alveolar processes of the superior maxillary bone and of the nasal bones occurred in turn, and the ulceration only assumed a latent condition during the last half of the malady when a perforation the size of 6 or 7 centimetres had taken place. This was attended by the loss of several teeth and imparted to the voice the nasal sound characteristic of this affection.

Shortly after the beginning of the necrosis the pa-

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tient commenced to rapidly lose in weight and strength and a marked cachexia became an important feature of the case.

A pustular eruption of the face and scalp was now noticed. The bone pains returned and the debility was so great that the patient was confined to the house. Curious to state, the appetite was greatly increased; indeed, the condition of syphilitic boulimia, so well described by Fournier, soon became manifest, as on several occasions during the absence of the wife, the patient invaded the pantry and partook, according to his own estimate, of enough food to satisfy three or four men.

It may be *apropos* to mention here that the patient had become, to a certain extent, accustomed to the trouble occasioned by the passage of food and could now swallow fairly well.

This condition was attended by little digestive disturbance beyond on rare occasions, slight attacks of diarrhea; but, on the other hand, gastric crises became an important feature and seemed especially to be aggravated by any form of mercurial treatment. These painful attacks continued throughout the progress of the case, and were equally noticeable during a course of restricted diet.

In the eighth month the anemic condition was extremely marked, and the patient, from a weight of one hundred and ninety pounds was reduced to one hundred and forty pounds. In despair he entered the Pennsylvania Hospital but remained only for two weeks, his chief grievance being the restricted diet to which he was subjected, and which ill accorded with his continued enormous appetite. During this, as well as on previous occasions, careful and repeated examinations revealed no disease of the special organs.

An examination of the blood showed three millions of red corpuscles per cubic millimetre and a diminutian of the hemoglobin to 40 per cent. An anemic basic murmer as well as venous souffle were also to be detected.

Added to this, prostration, the sallow complexion, pallid face, pinched features, and sunken eyes, made a picture long to be remembered.

In the tenth month esophageal obstruction was complained of and an examination by bougie made by Prof. Laplace, showed some constriction which, however, did not become extreme, At this time localized pains in the lumbar region began and soon became excruciating in their severity. This was attended by occasional loss of control of the sphincter of the bowel and remained present until the close of the disease.

Some three weeks before his death he was removed from under my care to the Medico-Chirurgical Hospital but the prostration became more marked and he died a little over one year after the beginning of the disease.

Unfortunately, notwithstanding strenuous efforts, a post-mortem was refused.

As may be imagined in a case of the above character, our treatment was as varied as it was unsuccessfull.

Early in the case the exhibition of either mercury or of iodide of potassium seemed to aggravate the gastric crises, and, besides, to be followed by an irritative diarrhea. Inunctions were tried in turn, but with similar results. Fumigations were likewise discontinued for the same reason, and even the recently vaunted hypodermatic method was certainly open to the same objection. Inunctions were continued for the longest period of time. General tonic treatment, although better borne, was of little apparent use.

On investigating the literature of this subject I find a rather growing tendency among the more recent syphilographers to appreciate that our accepted laws regarding the three fixed and precise stages of the disease must be amendable to some modification.

For example, Keys, in his last edition, writes as follows: "The line between secondary and tertiary syphilis is not always well marked, and although in typical cases the lesions become progressively deeper, commencing as mere efflorescences in the secondary stage, and gradually increasing in severity to the most extensive ulcerations and destruction of bone and cartilage in the tertiary; yet some of the symytoms naturally belonging to the secondary group, as the mucous patch and scaly eruption, frequently crop out in the tertiary stage, while more rarely nodes come on with early syphilis, and occasionally most extensive ulcerative or other tertiary (gummy) lesions appear within the first few months after chancre, perhaps all the lighter secondary eruptions having been omitted. This latter form is called malignant syphilis."

Osler tells us ("Practice of Medicine," 1892) that "in exceptional cases, manifestations which usually appear late (such as gummatous growths) may set in even before the primary sore has properly healed."

C. Mauriac, one of the most eminent of the French authorities, in his very interesting work ("Memoire sur les Affections Syphilitiques precoces du Systeme Osseux," Paris, 1872), details the history of a number of cases, of which the following is a short resume:

Obs. I.—Case beginning with indolent enlargement of both inguinal glands. Eight days afterward appearance of chancre. On the twentieth day of the initial lesions attacks of cephalgia with appearance of frontal tumors. Than secondary symptoms, cutaneous and mucous, etc. Mixed treatment. Cure.

Obs. II.—Period of incubation of two months' duration. Short duration of secondary symptoms. Parietal tumor with neuralgic pains.

Obs. III.—Omitted. Dates uncertain.

Obs. IV.—Chancre of lip; swelling of cervical glands. One month afterward slight secondary symptom followed by tumor on parietal bone.

Obs. V.—Syphilis of five months' duration without treatment, tumor in fronto-temporal region, etc.

Mauriac claims that these nodes are the result of periosteal inflammation, and tend to spontaneous recovery without suppuration, etc. But he quotes an account

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of a case reported by Dr. Henri Roger, which results in a different manner:

A girl, age two years, acquired syphilis (kissing an infected mother), presented the following lesions at the same time: 1. Indurated chancre on the superior lip not yet entirely healed. 2. Copper colored spots of roseola on thighs, on forehead, nose, and cheeks, and mucous patches on the vulva and anus. 3. Multiple exostoses; gummy tumors of the frontal bone the size of a filbert, skin covering healthy; semi-soft consistency; the right one reddish and shining at apex, imparting the sensation of fluctuation, and did in time suppurate.

Mauriac details the occurence of the other cases presenting similar lesions in the bones of the leg, sternum, and other parts of the body.

In these thirteen cases the shortest period of incubation after the appearance of the chancre was fifteen days, and the longest one hundred and twenty days. Curiously, the shortest of the series presented a history which resembles in part the one forming the subject of this paper. Briefly stated it is as follow:

Obs. VII—Urethral chancre in a man age nineteen years of habitually good health, which showed itself one month after his first connection. On the forty fifth day acute pains in the tibia, followed in from twenty-six to forty-eight hours by the spontaneous appearance of a bony tumor. Alteration of general health. On the sixty ninth day well-characterized roseola. On the sixtieth day diminution of tibial tumor and final disappearance. Four and a half months later mucous patches on lips and prepuce. Papular syphilis, etc.

Vidal de Cassis ("Traite des Maladies Veneriennes," 2d. edition, pp. 479, 480) reports a case of a tumor of the right clavicle occurring one month after chancre. The skin covering is perfectly healthy, the tumor twice the thickness of the bone. Extreme localized pains Cure in two months time. Dr Guyot (Societe Medico-Chiurgicale de Paris, July 9, 1868) reports a case of syphilitic periostitis of the first metatarsal bone, fity-six days after infecting exposure.

According to M. Daga ("Documents pour servir a l' Histoire de la Syphilis chez les Arabes," *Archives de Medecine*, 1864, t. ii. p. 314), syphilis is so severe among the Arabs that it is not rare to witness in the same subject the presence of syphilides, of gumma, and of multiple exostoses. Tertiary symptoms themselves may be observed at the very beginning of the disease.

According to the researches of M. Maltegazza syphilis pursues its course with great rapidity in South America, and manifests itself from the beginning not only by superficial cutaneous and mucous lesions, but by osseous lesions and the destruction of the bones of the nose al most immediately after the appearance of the chancre, and always before its cicatrization. (Quoted by Mau riac).

As eminent an authority as Prof. Hutchinson, of London ("Some of the Moot Points in the Natural History of Syphilis," *British Medical Journal*, January 24, 1886), reports the following interesting case:

"A young man, aged twenty-one years—too young, let me note, for it to be likely that he ever had syphilis before—was admitted into the London Hospital. He had still the remain of a chancre on him which was ulcerating in places. The date assigned to the beginning of the affection was only four months previous. He died suddenly and unexpectedly. The necropsy showed gummata in both testicles, in the spleen, and in the heart, death having been caused by the softening ulceration of the latter."

He adds, in conclusion:

"I have urged that many of the phenomena of syphilis usually counted as tertiary really occurs, as a rule, in the early periods, and there is no structure of the body which may not be attacked in the secondary stage. As an instance of this fact, I have mentioned rupia, periostitis, and disease of the viscera and nervous system."

Dr. R. W. Taylor, of New York, in an article entitled "Precocious Gummata" (*American Journal of the Medical Sciences*, July, 1887), describes several interesting cases of that form of the skin affection. He says, in conclusion, that these lesions may appear as early as the second, third or fourth month after the initial lesion, and may terminate in ulceration.

Records of early syphilis of the nervous system are also attainable.

Taylor reports a case of hemiplegia in the fifth month.

Bassereau and Vidal de Cassis one of facial paralysis a few weeks after appearance of chancer.

Van Buren and Keys and Fournier respectively give instances of several cases of different forms of paralysis occurring before the fifth month.

Fortunately these cases are very rare. For example, Mauriac mentioned that the thirteen cases reported by him represented an experience of over four thousand cases. Whether they represent an unusual amount of the virus absorbed, or an undue susceptibility on the part of the individual is an open question.

The generality of opinion would seem to indicate the possibility of a severe syphilis following a case of phagedenic chancer, as in this report. For example, Batington tells us (Ricord and Hunter, "Venereal Diseases," 2d edition, p. 271) that "symptoms which follow the phagedenic sore are peculiarly severe and intractable. They commonly consist of rupia, sloughing of the throat, ulceration of the nose, severe and obstinate muscular pains, and similar inflammation of the periosteum and bones. Similar complaints will follow the ordinary chancer; but when they follow a phagedenic sore they are very difficult to be cured; and it is not uncommon that the consitution of the patient should at least give way under them, and that the case should terminate fatally."

Bassereau ("Histoire Naturelle de la Syphilis, p. 84), as well as Diday, agree in the main regarding the above statment.

Bumstead and Taylor ("Venereal Disease, 5, edition,

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p. 499), in commenting on the above, express themselves as follow: "Admitting the truth of this rule, it does not follow that the condition of the chancer in any manner determines the severity of subsequent symptoms, but merely that it is an indication of the activity of the virus and of the state of the patient's system—the two causes upon which the severity of the attack chiefly depend."

The latter observation does not corroborate the history given both by my patient or the members of his family. It was particularly claimed that he had enjoyed unusually good health throughout his life, and the quantity of alcohol which he made use of was not in excess of that commonly used in his occupation.

Regarding the presence of the nodules on the tibia, these latter occurred after a longer period of time than in the case (Obs. VII.) reported by Mauriac, yet the gummatous ulceration of the hard palate at so early a period is, as far as I can discover, without detailed precedent, and certainly places this history prominently among similar records.

Welcome Address.

BY DR. A. B. SHAW, ST. LOUIS,

President of the St. Louis Medical Society.

Delivered before the First Annual Convention of the Southwestern Association of Railway Surgeons at St. Louis, Mo.

MR. PRESIDENT AND GENTLEMEN OF THE SOUTH WESTERN ASSOCIATION OF RAILWAY SURGEONS.—I am very sensible of the distinguished honor that has fallen to my lot in being permitted to welcome you in behalf of the Medical Profession of St. Louis to the acknowledged commercial, medical, and scientific metropolis, and exponent of that chivalrous hospitality so eminently characteristic of the great, grand, and growing Southwest with its glorious potentiality and possibilities in every direction in which the present advanced civilization is supposed to excel. As strangers we welcome you and give you the freedom of our city, as medical men and scientists we throw open to you our hospitals and colleges, and wish you God's speed in your comparatively new enterprise which tends to the greater improvement of the means and methods of caring for the loved ones of numerous households, the bread winners for many homes, the artisan, the statesman, the commercial giant or that parasite the tramp, without regard to station or degree, when overtaken by that most horrifying and dreadful of all calamities a railroad wreck. While each member of every department of industry, art, science, or of the learned professions is presumed to be able to successfully meet any emergency presenting in his individual domain, in many of them the time of accomplishment is not always an essential feature, and the artisan, the lawyer, the scientist, or the eclesiastic may deliberately prepare for such conditions as may call for an exhibition of his skill; but it is not so with the medical man who must always be ready with his lamp filled and lighted and mind clear and fully prepared to meet any and every adversary of health and soundness of body and mind the moment it appears. He is truly an emergency man, one of the most precious of a merciful God's good gifts to humanity, of the most perfect developments of the medical profession, so far as its ability to cope with emergencies is concerned, is before me to-day in the Railway Surgeon. Through untiring energy and persistent effort railway surgery has been developed from a very small beginning into a distinctive, well defined individuality of no mean proportions, pregnant with great possibilities of still further advancement.

In 1866 the Central Pacific established a railway hospital. In 1879 Dr. J. W. Jackson, on lines furnished him by Dr. W. B. Outten established a hospital on the Missouri Pacific. In 1881 Dr. Outten, induced the Iron Mountain to establish its Hospital Department, and succeeded in securing by railroad corporations the recognition of the necessity for and establishment of the office of Surgeon in Chief for a railroad system, and placing such official in charge of the hospital. Prior to this time the hospitals had been managed by the railroad officials themselves.

In 1888 the first National Association of Railway Surgeons convened in Chicago with a membership of 288 in attendance, this National Association now has a membership of nearly 2000 with a record of 1400 in attendance at its last convention held at Omaha this year.

While every gentleman before me had probably made a personal sacrifice in order to be at this meeting I have no doubt but that great benefit to each and every one of us will result from thus coming together. Such conventions as this have been the means of placing the medical profession in its proper relationship with railroad corporations, for railway surgery surgeons are now employed for their surgical ability and honesty, and are no longer made use of to further interest a part from those in harmony with the dignity of their calling.

However it may be with others I know that one of the most prominent roads of the west looks upon the railroad surgeon as one of the most essential factors in the proper conduct of its affairs. Depending upon his judgment and advice rather than on legal processes in the determination of what is fact and justice as between man and man in the settlement of claims against it for injury sustained while in its employ or on its roadway.

To the advent of the Railway Surgeon of to-day is to be attributed the lively appreciation by railroad corporations of the economy of justice in its settlement for damages. No longer can a railway surgeon be made the tool of the legal profession. The genius is not yet born who can successfully maintain a lie and only an idiot will attempt to do so. Always adhere to the unvarnished truth, it and it alone will stand the test in this age of science. Prior to the formation of the National Association of Railway Surgeons in 1838 there was no literature worth the name on railway surgery,

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but since that event there has been evolved a nucleus of magnificent proportion around which in the near future will be seen clustering the crystalized deductions drawn from the logical conclusions of men who, untrammeled by adverse influences, have given their best thoughts to the solution of the manifold problems constantly presenting to the railway surgeon in the consciencious discharge of his duty.

Again I say welcome.

Voice Without a Larynx.—At a meeting of the College of Physicians, on the 4th inst., Dr. J. Solis-Cohen exhibited a patient who speaks without a larynx; and the College desired the President to appoint a committee to investigate the manner in which the voice is produced. *Med. News.*

The larynx and the uppermost tracheal ring of this patient was removed by Dr. Cohen some eighteen months ago for an intraneous and extraneous laryngeal adenocarcinoma. The upper end of the trachea was drawn forward and then stitched to the skin, so that there has been no communication since the operation between the lungs and the mouth. Yet the man speaks with a fairly well modulated voice, sufficiently audible for all practical purposes.

He breathes without a tracheal canula, through the upper orifice of the trachea, which presents externally. When he is about to speak the skin above the trachea becomes distended into a small vesicle of air, the contents of which are propelled in a stacatto-like manner against some structures just at or above the orifice of esophagus, and which Dr. Cohen takes to be the horizontal fibers of the inferior constrictor muscles of the pharnyx.

Church of England Sanitary Assocation.—Sir Spencer Wells, Bart., speaking at a recent meeting of the Association upon "Cremation," said that the distinguished German engineer, Mr. Lindermann, in sinking wells below the bed of the Rhine to obtain a supply of water for a neighboring town, had found the water so impure that it could not be used, and he was able to trace the source of contamination to another town about 20 miles off. Professor Groves, F.R.S., had stated that where there was drainage or infiltration of water from burial grounds, the water passing into wells or streams caused them to be contaminated with easily decomposable nitrogenous organic matter; but he was unable to give an opinion as to how far disease might be communicated in this way. The infected germs remaining in dead bodies were believed, by scientific men of the highest distinction, to be preserved for many years by burial in the earth to multiply there, and in due time to renew their deadly influence by polluting earth, air, and water.—*Med. Times and Hosp. Gaz.*

EDITORIALS

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All letters whether intended for publication or not must contain the writer's name and address, not necessarily for publication. No attention will be paid to anonymous communications.

Secretaries of medical societies will confer a favor by keeping us informed of the dates of the meeting of their respective societies, and of officers elected.

Members of the profession who send us information of matters of general interest to our readers will be considered as doing them and us a favor, and we shall take pleasure in inserting the substance of such communications.

All communications for the editor, and all books for review, should be addressed to the editor, 914 Locust street.

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Legislation in the United States for the Prevention of Blindness.

In consideration of the large percentage of blindness due to ophthalmia neonatorum it seems a wonder that in this progressive age no law exists in the vast majority of the States of the Union with regard to the prevention of blindness due to this frequent source. It is a well known fact that in institutions where it has been an invariable rule to introduce a drop of a two per cent solution of nitrate of silver into the eyes of the infant immediately after delivery, blindness resulting from blenorrhea neonatorum is an almost unheard of occurrence. It should be the endeavor of the phvsicians of all the States to use their influence with respective legislative bodies to have a law passed to require midwives and nurses to report every case of reddened or inflamed eyes of infants to a legally qualified practitioner and, with our confidence in the progressive spirit of the American profession we may safely predict that in the near future an effort will be made in our State as well as all other States of the Union to have a law passed to this effect. In order to add our mite in bringing about this reform we take the liberty of reproducing a paper read upon this subject in the Section on Ophthalmology, at the forty-fourth annual meeting of the American Medical Association, by Lucian Howe,

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M.D., of Buffalo, N. Y., which we have perused with great interest.

The following is the paper, in its full text, for which we are indebted to the *Journal of the American Medical Association* of November 25, 1893:

At the meeting of the American Ophthalmological Society in 1887, I presented a short article in regard to the increase of blindness in the United States, calling attention to the fact that according to the census reports, the number of blind in this country was increasing much more rapidly than the population. The Society was kind enough to appoint a committee to examine into the subject, as did also the Medical Society of the State of New York, after the same figures had been presented there for consideration. The committee in both of these Societies reported the advisability of some legislation to limit the further increase of what may be considered one of the principal causes of blindness, namely, ophthalmia neonatorum. Since that time, the States of New York, Maine and Rhode Island have all passed laws which have for their object the preventative treatment of this disease, and I wish here to show the desirability of similar laws in other States.

The facts in regard to the subject were published in the Transactions of the New York Medical Society and of the American Ophthalmological Society so completely that there seemed but little to add to the subject. Since then, however, the statistics gathered by the census of 1890 have been obtained, and these furnish sufficient additional data to warrant my calling attention to the subject again, and recapitulating briefly the reasons why legislation in various States should be enacted for the prevention of blindness.

In 1880, for the first time, a systematic attempt was made to ascertain the entire number of the defective classes—these among the rest—and when the statistics for that year were compared with previous years the apparent increase was astonishing.

When, however, the number of blind in 1890 is compared with the number in 1880, we find that there is an increase of only 2.20 per cent, there having been in 1880, 48,929 blind and in 1890, 50,411. There are good reasons, however, for considering that this last census gave a much less complete record of such persons than did the census of 1880. I am indebted to Hon. Robert D. Porter for a type-written copy of the returns concerning the blind taken June 1, 1890. The summary shows that there is a total of 50,411. Male, 27,983; female, 22,458; white, 43,351; colored, 7,060; natives, 41,265; foreigners, 9,146.

In some States this increase has been very slight; in others quite marked. But whether the number is large or small, the important fact remains that a really large percentage of the blindness is caused simply by neglect in early childhood. I mean, as a result of ophthalmia neonatorum. It is difficult to estimate exactly what percentage these cases bear to the total number of the blind, but various authorities estimate this from nine and one-half to ten per cent, or even more. In other words, on examining the figures carefully, we can say that without fear of exaggeration there are wellnigh five thousand blind in the United States, who are in that condition merely because of neglect on the part of those who had charge of them in early infancy. If the estimates were based upon the number of blind in asylums the percentage would be almost twice as large, as has been proved by an examination of a large number of inmates of the blind asylums, not only in this country but also in Europe. The details of this are referred to in the papers already mentioned, and the facts can be easily substantiated by reference to the works of Fuchs, Magnus and others. On an average it may be stated, with a considerable degree of accuracy, that at least eighteen and one-half or nineteen per cent of all the blind in early life are in this condition from ophthalmia neonatorum.

This fact would bear statement in detail were it necessary, or were it in accordance with the limits proposed for this short communication. Another fact which I would mention is one which also can be briefly stated before a society of those accustomed to treat ophthalmia neonatorum. This is, that ophthalmia neonatorum can now be considered a preventable disease. I need not elaborate this by calling your attention to the figures presented by Crede and others, or by referring to my own experience, or that which occurs in the practice of every one who has to deal with this disease. We all know how favorable a prognosis can be given in the early stage, and on the other hand we know how extensive are the ravages which may follow after ulceration of the cornea has once begun. All agree, I think, that when these cases are seen within the first week after birth a generally favorable prognosis may be given.

This brings me to the next point which I wish to make: that is, the desirability of legislation which should force nurses and attendants to bring these children to the notice of practitioners while the disease is still in the very earliest stage. The story is a familiar one of the infant being brought to the office of the oculist, with the cornea ulcerating or perhaps perforated, and the mother and sometimes the attending physician thinking that the child has "taken cold" and requires perhaps no further treatment than the hot water or milk which has been applied to the eyes. And the scene, also, is unfortunalely familiar, of the mother weeping over a hopelessly blind child, all simply because the nurse has supposed that the infant has merely taken cold and had been relying upon some of the numerous household remedies just a little too long. The question before us, therefore, is what means can be adopted to bring these children as soon as possible to the notice of a competent physician. Education of the laity is useless. Urging the nurses, professional or others, is equally insufficient. It remains only to place the responsibility at once where it belongs, by imposing upon such persons a severe penalty. The surest and best means of accomplishing this is undoubtedly by legislation.

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This was the view taken of the subject by those who have considered it most carefully; and following the plan which had been partially adopted before in Switzerland, and elaborating it, a concise but explicit bill for the proper protection of these infants was passed by both houses of the New York Legislature, 1890, without a dissenting vote, and became a law. The law was known as Chapter 41 of the laws of 1890, and was as follows:

AN ACT FOR THE PREVENTION OF BLINDNESS.

SECTION 1.—Should any midwife or nurse having charge of an infant in this State, notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse so having charge of such infant, to report the fact in writing, within six hours, to the health officer or some legally qualified practitioner of medicine, of the city, town or district, in which the parents of the infant reside.

SECTION 2.—Any failure to comply with the provisions of this Act, shall be punishable by a fine not to exceed one hundred dollars or imprisonment not to exceed six months or both.

SECTION 3.—This Act shall take effect on the first of September, eighteen hundred and ninety.

My own impression is that this law was sufficient to cover all cases, and a sufficient number of convictions could have been obtained under it, not only to call public attention to the existence of the law, but also to prove a wise and very excellent lesson to the class whom it was practically to affect. A few convictions would have more effect in educating the laity and those who pretend to be nurses than would any number of lectures, leaflets or appeals of any kind. One or two partial attempts were made under that law to bring nurses to trial in New York City, especially by Dr. Derby of the New York Eye and Ear Infirmary. He thought, however, that a loop-hole was left by the word, "notice," because nurses would be apt to say when placed on the stand that they had not noticed any such redness of the eyes or discharge from them. This is such a small excuse that it ought not to prexent the working of the law as there presented. Another objection to this, was that it was not quite strong enough, and not being a felony, it might be difficult to place the responsibility on the proper person for beginning a suit.

The matter, therefore, was taken in hand by Hon. Elbridge Gerry, who for twenty years has identified himself with legislation for children. The substance of this law has been incorporated in another, known as Chrpter 355 of the laws of New York for 1892. The clause in regard to this teads as follows:

* * * Being a midwife, nurse or other person having the care of an infant within the age of two weeks who neglects or omits to report immediately to the health officer or to a legally qualified practitioner of medicine of the city, town or place where such child is being cared for, the fact that one or both eyes of such infant are inflamed or reddened, whenever such shall be the case, or who applies any remedy therefor without the advice, or except by the direction of such officer or physician, etc.

It is further provided that this is to be punishable as a felony.

We can, therefore, consider that in New York we have a law sufficiently stringent to teach nurses and midwives what their duties are, and parents what risks their children run when there exists what is ordinarily called a simple "cold in the eyes." It is important that the first cases should be so clear as to make conviction a practical certainty and in my own vicinity, at least, some cases of probable guilt have been allowed to pass unpunished. But it can only be a question of a short time before a good typical violatien of this statute comes under some one's notice, and after having been once tested subsequent convictions will be easy.

The State of Maine was the second to pass such a law. There the matter was taken in hand by Dr. Holt, of Portland, with his associates. The bill was known as number 97 of the Senate, and has become part of the laws of 1891. The text is as follows:

SECTION 1.—Should one or both eyes of an infant become reddened or inflamed at any time after birth, it shall be the duty of the midwife, nurse or person having charge of said infant, to report the condition of the eyes at once to some legally qualified practitioner of medicine of the city, town or district in which the parents of the infant reside.

SECTION 2.—Any failure to comply with the provisions of this Act shall be punishable by a fine not to exceed one hundred dollars, or imprisonment not to exceed six month, or both.

SECTION 3.—This Act shall take effect on the first day of June, eighteen hundred and ninety-one.

The third State to have such a law was Rhode Island. In that State the subject was brought to the attention of the Legislature, principally through the exertions of Dr. F. T. Rogers. That was passed at the January Session of 1893, and the text is as follows:

SECTION 1.—Should any midwife, or nurse, or person acting as a nurse, having charge of an infant in this State, notice that one or both eyes of such infant are inflamed or reddened, at any time within two weeks after its birth, it shall be the duty of such midwife or nurse, or person acting as nurse, so having charge of such infant, to report the fact in writing, within six hours, to the health officer or some legally qualified practitioner of medicine of the city or town in which the parents of the infant reside.

SECTION 2.—Every health officer shall furnish a copy of this Act to each person who is known to him to act as midwife or nurse in the city or town for which such health officer is appointed, and the Secretary of the State shall cause a sufficient number of copies of this Act to be printed, and supply the same to such health officers on application.

SECTION 3.—Every person who shall fail to comply

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with the provisions of this Act shall be fined not exceeding one hundred dollars, or imprisonment not exceeding six months, or both.

SECTION 4.—This Act shall take effect July 1, 1892.

It will be observed that the three laws now in existence are very similar, and as that of the State of Maine omits the word "notice," and is still complete in itself. it is perhaps the best thus far enacted, except that the penalty is too light.

A question might arise as to what advantage it is to oblige nurses and midwives to report to physicians a disease of which a certain class of so-called doctors are almost as ignorant as the nurses themselves. The answer to this is three-fold:

1. The nurse is made to appreciate her responsibility, not only in that case but in others, and to know that the condition indicated by the redness and discharge is not anything to be trifled with.

2. The parents also become alarmed when they know that the disease is sufficiently serious to be the subject of special legislation, so that in choosing a practitioner they select with rather more than ordinary care.

Finally, as for the physician himself. If he accepts the case he feels that he must understand it thoroughly and he will be apt to look it up with considerable care in his text-books and treat it intelligently. Above all, if he fails to do that, the parents have a responsible individual against whom they can with perfect justice enter a suit for malpractic, and if he has proved himself incompetent he not only suffers the penalty which a law has provided for him, but one such case would be an example to him and to other practioners in the community in which it occurred.

It seems needless to urge further the advisability of similar laws in other States, especially in those where there is a large proportion of foreign emigrants in the population. We know that their children are not only often cared for by midwives, but also often given over to them entirely at an early stage, and women when accustomed to assume any such responsibility must be taught this part of their duties. If they will not learn in any other way, a heavy fine or imprisonment is but a small penalty for the crime of having blotted out the sight of a human being. Where the German population is large the children are often cared for entirely by midwives and these, though usually well qualified by instructions obtained in their native countries, are also not infrequently ignorant and careless in the extreme, and need to be taught that the hand of the law may interfere for the protection of the children given into their change.

Having shown that such legislation should be enacted, and that it is our duty to lend our efforts and personal influence to obtain it, I wish to say, finally, that it can be done usually with little effort. Of course in any such undertaking it is necessary to enlist the sympathy and co-operation of a few leading men in each branch of the Legislature—those whose standing and character is such as to command respect for any measure which they advocate. The personal co-operation of the Governor is also a warrant of success from the first. But the average legislator is ready to listen patiently to any such claims of an unfortunate class, and his assistance for the bill is not difficult to obtain, being certain, as he is, that the originators of it have only the best motives. If the politicians hesitate or are inclined to smile at measures for the relief of sore eyed babies they are quickly brought to their senses, if confronted by such evidence as is unfortunately always at hand in every large city, or can be easily obtained among the inmates of every asylum for the blind. Such men realize that they have with them the hearty approval of their constituents, of the press, and of the people, and that they are saving from a life of misery, to which death is often preferable, a large class of those who would otherwise be hopelessly blind.

A License to Practice Medicine Includes Surgery.—Many are the devices resorted to for the purpose of avoidnig the payment of doctors bills. (*Journ. Amer. Med. Asso.*). In the case of Stewart v. Raab, decided by the Supreme Court of Minnesota, Sept. 8, 1893, just reported, it was contended that a person holding a certificate to practice medicine could not lawfully practice surgery, nor recover for professional services which included the performance of surgical operations. The statute under which this question was raised is entited, "An Act to regulate the practice of medicine in the State of Minnesota," and the first section prescribes that every person practicing medicine in any of its departments shall possess the qualifications required by the act. To persons possessing these qualifications, certificates shall be issued by a board of examiners, and these certificates authorize the possessors to practice "medicine and surgery" in that State. The terms, "practice medicine," in the title of the Act, and "practicing medicine," in its first section, are used, the court says, in the broad and popular sence in which they are generally understood, applied and, in fact, defined. One practicing medicine, practices "the art of preventing, curing, or alleviating diseases, and remedying as far as possible the results of violence and accident" Therapy is the treatment of disease, and surgery is therapy of a distinctly operative kind. A certificate which, in terms, authorizes the possessor to pursue the practice of medicine under the conditions of such a statute as the above, necessarily includes surgery, The statute does not require a license or certificate for each department in medicine. Consequently there is nothing whatever in the point that because surgery is not expressly mentioned in the certificate, the holder thereof violates the law when performing surgical operations.

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ABSTRACTS

MEDICINE.

Microbes and the Social Question. — Dr. Paul Gibier, delivered the following address at the Inauguration of the New Building of the New York Pasteur Institute (*Therapeutic Review*):

The specialist engaged in researches in a circumscribed portion of the vast field of science seldom forms a rapid conception of the consequences of his discov eries, nor do the thinkers, retained in other pursuits which might be advanced by the application of these discoveries, generally profit by them immediately, either owing to their unfamiliarity with the subject from which they were evolved, or because they cannot detect the link which unites two branches of knowledge which are apparently isolated. This, it seems to me, is the condition still prevailing with regard to Bacteriology in its relation to Sociology. It is true that long before the discovery and the promulgation of a principle, the force of circumstances partially and in a manner somewhat anarchial effects its application. The pub lic and international hygienic measures, which it was ever an aim to establish, are a demonstration of this fact in the line of the subject that I am discussing. In all times also, the properties of bodies have been utilized; but this did not involve either Chemistry or Phys ics. One has only to recall the immense progress recently achieved in a few years, comparatively with the ages which have elapsed, in order to form an idea of the importance of the principles and laws established in scientific matters, when viewed from the standpoint of the increased happiness of mankind, which after all, is the supreme object of scientific research.

The thought that Bacteriology and Political E con omy have anything in common may be perplexing; but it will be seen, in the sequel, that the study of contagious organisms which must be the scientific basis of Hygiene, can and shall contribute important aid to those who, thinking that all is not "for the best in the best of worlds," are trying to ameliorate the miserable condition of the "disinherited."

Without attempting to sustain the assumption that the social problem may be solved by a microbe, it is permissible to foresee the importance of a popular comprehension of the determinate causes of epidemics and contagious diseases in general. Do we not observe communities imposing upon themselves heavy sacrifices in order that insanitary localities may be made healthy? This is already a step in the way of progress, but it is not enough, and much remains to be done.

In the accomplishment of this work, the medical profession has had a predominating influence. In the grand and beautiful things which still remain to be done, the physician must not permit himself to be distanced. It is his duty and his interest to be the champion of social Hygiene as well as of unqualified hygiene. Before assemblies and powers of the nation, he need not appeal to political interests. His power and influence are in the calmness of Science, which, without artifices of rhetoric and without evoking sentimental emotions, coldly unfolds the facts and makes man think and act.

Experimental medicine and bacteriology teach us that certain inoculated maladies do no take effect on laboratory animals that are well cared for and well fed. If, on the contrary, these aninals be overworked by being forced to exercise rapidily and persistently in a specially constructed apparatus, or if they be deprived of food, they easily become the prey of the bacteria that were innocuous in the healthy state. The cholera bacilli introduced into the intestine of some animals do not develop and cause their death unless when associated with starvation. It is so also with man, and we frequently witness the sad spectacles of epidemics striking down miserable nations, and contagious diseases decimating the wretched classes of the population.

At all times we have seen religions appeal to the hearts of men and endeaver to evoke in the strong and powerful the sentiments of pity and of love for the weak and disinherited. In the presence of the entirely inadequate results of ages, which seem to justify the Master's words: "The poor you shall have always with you," one may rightly ask if the extinction of pauperism should not be the work of another power, a power that is, itself, a sort of religion, uniting the elite of all nations and subjecting them to its laws; I mean the religion of Science.

Science cares not to appeal to the hearts of men and to cause their sentimental chords to vibrate sympathetically. It is content with demonstrating to the understanding of its adepts that the germs of infectious diseases not only triumph easily over man and animals that have been weakened by physiological misery, but, also, that these germs, at first incapable of multiplying in the blood of vigorous individuals may, after acquiring especial virulence by propagation in the weak, intensify their destructive power and easily destroy the strong. This is the story of what happens every day around us. When despite quarantines and other preventive measures, typhus, cholera, and a hundred other epidemic diseases appear in a city, the first victims are in the ranks of those whom poverty has condemned to unhappy and unhealthful existences. But those who have the happiness to lack nothing will be illadvised to cry out in their selfishness: "What matters it to us! It is the poor only who die," for the contagion will not be slow in gaining strength in the field in which it is first planted. The germs will multiply and acquire a sort of audacity and, after festering for a time in the dismal shadows of the poverty-stricken districts, they will be diffused in the light of day and, invading the favored localities, they will penetrate into the house of the wealthy and carry with them sorrow and death.

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It must not be imagined that these examples are exceptional or fanciful. They are observed daily, and all of us are threatened by the same dangers because we are incessantly surrounded by elements of destruction which claim more victims from among us than typhus or cholera. They frighten us less because we have been accustomed to regard them as our inseparable companions in life and the inevitable and "natural" causes of our death.

Whence came the diphtheria which every day strikes down our children in our homes that are constructed with every attention to hygiene and comfort? There, in the obscure and badly ventilated alley, among the children of the poor, whose features are emaciated by hunger, whose blood is impoverished by cold. And the millionaire regarded by us as one of the wealthiest and happiest men on earth, is stricken down at the very moment perhaps, when he thinks of rest and peaceful enjoyment of his millions accumulated by years of persistent and exhausting labors! By what were snatched from him the twenty or more years of happiness and of rest which should be before him?

By a germ which has made more victims among us than all those of the great appalling epidemics. By a germ developed in the lung of some poor wretch expectorated in the throes of a racking cough and borne on a grain of dust by the air that the men of wealth breathed. Some years since I wrote the following words: "The misery of the poor distils a bitter and virulent gall that filters into the cup of the rich and contaminates the veins of his children." Bacteriology, the new science, cultivated in the Institute which we inaugurate to-day, furnishes us with a vivid verification of the truth of the proposition. We are bound to one another by solidarity and common interests both on the material and on the superior planes. But, by what means, it shall be asked, may this solidarity be made as profitable as it is obnoxious, as healthy as it is dangerous? It is not a part of the task which I have undertaken to day to treat of this phase of the subject and I do not flatter myself that I can solve the problem, which has presented itself. At present my function is limited to indicating the advantages conferred upon the community by my specialty. Perhaps at a later period and inspired by the same studies, I may be able to suggest a formula, but at present I shall be content if I succeed in demonstrating my proposition, namely: the importance to the welfare of the community of Bacteriology, the principle founder of which has his name engraved on the front of this Institute: the Pasteur Institute.

A Case of Cerebral Syphilis.—Brousse (*Montpellier Medical*) has reported the case of a woman, twenty-two years old, who was found at the foot of her bed, semi-comatose and unable to move or to explain her condition. Examination disclosed the existence of a complete left hemiplegia, involving the face as well as the extremities, but without anesthesia; there seemsd to be a slight degree of hyperesthesia upon the left side. The muscles of the upper part of the face and the ocular muscles were not involved; the pupils were dilated. No lesion of the heart or great vessels was to be detected. The woman presented numerous syphilitic stigmata. There were large patches of discoloration upon the anterior aspect of the chest and eruptions of diverse character and at different stages upon the thighs and legs, as well as the remains of healed gummata, and on the left thigh a gumma in process of ulceration. Mercurial inunctions were at once instituted and the administration of potassium iodide begun, while mercurial plaster was applied to the ulcerating gumma and a gargle of potassium chlorate was prescribed. In the course of a few days intense stomatitis with copious salivation developed, and the mercury had to be withdrawn, the iodide, however, being continued. Appropriate treatment was directed to the condition of the mouth. The woman's condition meantime improved. The apoplectic condition began to recede, and she was able to give an account of herself. It was learned that her mother had died in attack of apoplexy at the age of forty five years. She herself had acquired dissolute habits at the age of sixteen, and at the age of seventeen contracted a chancre of the left labium minus. Subsequently there developed a malignant syphilis of rapid evolution. For several years there had been intermittent headache, which later became dull and persistent and was referred particularly to the right frontal region. There was neither vertigo, convulsions, nor impairment of vision. For a year menstruation had been entirely suppressed. After a night of excessive venery the woman was overcome and fell at the foot of her bed, although consciousness was not entirely lost. In this condition she was found, defiled by her urine and her stools, which she had involuntarily passed beneath her. The woman believed that the attack coincided with the time for the occurrence of menstruation. In the further progress of the case subcutaneous injections of mercury benzoate were instituted, the iodide being at the same time continued. With this treatment there was progressive improvement as regards motility, but the general condition remained poor. At the end of twelve weeks, without apparent cause, a violent epileptiform attack occurred, and was soon followed by others in rapid succession. The attacks were characterized by clonic convulsions in the extemities of the right side, with tonic spasm of those of the left, and conjugate deviation of the head and eyes to the left. The action of the heart was at the same time extremely rapid, and there was profound depression, but there was no elevation of temperature. Some relief was afforded by the subcutaneous injection of ether and the administration of bromide. These attacks were followed by great weakness and an increase of the left sided paresis. From this time the condition of the woman grew progressively worse. Right sided pneumonia developed, which was thought to be tuberculous, although repeated examination of the

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sputum failed to disclose the presence of tubercle bacilli. Troublesome diarrhea additionally set in; the state of weakness grew more profound, and death took place amid the symptoms of asphyxia. At the post-mortem examination the calvarium and the cerebral membranes presented no abnormality other than a notable thinning at the anterior superior angle of the parietal bone of either side, and a depression of the dura mater in the right frontal region. There was a large subdural accumulation of sero-sanguinolent fluid and injection of the pial vessels, particularly in the Rolandic region There was also generalized cerebral edema. To the touch the right Sylvian artery conveyed the sensation of a hard cord; its walls were greatly thickened. At the root of the third right frontal convolution was a circumscribed area of yellow softening, about as large as a nut, extending deeply and involving somewhat also the adjacent ascending frontal convolution. There was another, but smaller and superficial area of softening at the posterior extremity of the right Sylvian artery involving the angular gyrus. On making sections of the brain an extensive area of softening was found involving the anterior two-thirds of the caudate and lenticular nuclei, as well as the anterior limb of the internal capsule and the motor zone of the centrum ovale. The posterior third of the posterior limb of the internal capsuls escaped. Pons, medulla, and cord presented tracts of descending degeneration. The right lung was adherent to the costal pleura. It presented the appearance of a fibro caseous mass and was filled with yellowish miliary granulations, particularly confluent at the apex. The bronchi were filled with pus. The left lung was congested, particularly at its apex, but presented no granulations. During life it was thought the symptoms were dependent upon the presence of a gumma in the brain, but the autopsy demonstrated that the pathologic process was essentially a syphilitic endarteritis leading to anemic softening.

A Case of Stramonium Intoxication.—The comparative rarity of these cases, at least in our large cities, and the marked manifestations exhibited in this instance, lead me to place it on record.

Some three months ago, I was summoned early in the morning to Mrs. B. The impression made upon me was that I had to deal with a case of acute alcoholism. Patient, a woman about thirty years of age, well developed, robust and healthy in appearance, retired perfectly well and sound, one hour before, and fell asleep shortly after lying down. Had not been exposed to any contagion, "nor had she taken any stimulants or medicines." Shortly after falling asleep her husband noticed that she became very restless, "breathing deeply and loudly," and upon rousing her, she appeared "out of her mind and wild." Pulse, 130 and thready; temperature, 100.2° F; pupils markedly dilated; conjunctivæ deeply injected and reddened; eyes wildly staring and restless. Face and chest covered with an erythema like that of scarlatina or that caused by belladonna. Tongue and fauces dry and parched; respirations shallow and increased to 35 per minute. Wild and active delirium; hallucinations of sight and hearing. Complains of intense thirst and severe frontal headache. Patient almost unmanageable, throwing and breaking everything within reach, and constantly looking under bed and searching closets for strange men and animals.

The symptoms were those of atropinismus, and after administering copious draught of warm water, salt, and mustard to gain time, I gave morphine sulfuric 0.03 (gr. ½) subcutaneously.

Upon declaring to her husband that the patient must have imbibed something that was poisonous, he learned from a servant that her mistress had taken some kind of tea before retiring.

Upon being shown what remained, I recognized the toothed, ovoid thorn-apple leaves, the bitter, pungent, and metallic taste that is peculiar to it.

On further search a package of compressed stramonium leaves, such as is sold in he stores, was found. Diagnosis was established.

One hour after the exhibition of the morphine salt, patient was resting quietly; an ice-bag had deen put to her head and morphine sulfuric 0.015 (gr. ¼) was ordered every four hours, and cold black coffee for the thirst, which still was intense. The next forenoon, when I saw my patient, she had become perfectly rational; the erythema had disappeared, he had also the throat symptoms. She had not the least recollection of what had occurred during the night after having taken the tea, which was intended to restore her menstrual flow. The mydriasis lasted for almost four days.

It may be of interest to know how much of the drug had been taken. The package contained one ounce of the dried leaves, of which one-half had been used in preparing the infusion; to this was added a cup (eight onces) of boiling water, and after standing one-half hour, she took two tablespoonfuls. From this we may deduce that one ounce of an infusion of the strength of 1 to 16 (considerably weaker than is officinal [1 to 10]) caused toxic effects in this case.

The quantity is certainly not a large dose, and it is to be presumed that the woman has an idiosyncrasy for the drug.

Patient made a complete recovery. — Charles O. Maisch, M.D. in *Med. Rec.*

Pathology of Influenza.—The author who is Prosector at the Marien Hospital at St. Petersburg, furnishes a detailed account of forty cases of grippe on which autopsies were performed (*St. Petersb. Med. Woch.*) These cases were all of individuals who were otherwise healthy. On microscopical examination of the voluntary muscles, he occasionally found loss of the striæ, however only in isolated muscle bundles. In three cases he discovered evidence of hemorrhage in the muscular tissue, and the resulting hematomas were so large that entire bundles of muscle-fibers were involved.

A closer microscopical examination disclosed the fact

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that there had been a parenchymatous bleeding, and probably a bleeding by diapedesis. In the vessels were found numerous small micro-organisms, and it may be inferred from this that there was nutritive disturbance of the vessels. As the hemorrhages were invariably unilateral, the author concludes that the lesion involves the sympathetic centers.

Pachymeningitis hemorrhagica interna he found only in one case, but in fifty per cent of the cases there was a hyperemia of the pia, and in two cases even bloody infiltration. Suppurative cerebral meningitis was found in one case. In those cases with bloody infiltration of the pia, there was found besides, hemorrhage into the lateral ventricles.

As a general rule, Kusskow found the heart muscle soft, friable and anemic.

A microscopic examination showed a classification of the muscle cells, loss of the striæ of the shorter muscular fibers, while the longer fibers were unusually prominent. Fatty degeneration was not found.

In a preparation stained with Mueller's fluid, Kusskow found enlargement of the muscle cells, with changes similar to those found in typhoid lesions of the bowels. Hyperemia and infiltration of the pharynx and larynx, he found occurred quite frequently.

Careful examinations of the capillary vessels of the lungs and bronchi were made. The author calls special attention to the frequency of labor inflammation. In eight cases he found purulent infiltration, and of these six resulted in gangrene.

The gangrene spots as well as the purulent ones, were wedge-shaped, with their bases towards the pleura. Capillary thrombosis, such as is described by Klebs he seldom found, but when so found it occurred in fibrinous plugs. Venous thrombosis was much oftener discovered, as was also arterial thrombosis, but the latter not so frequently as the former.

The spleen, in the majority of cases was contracted; only twelve were found to be enlarged. These were also microscopically examined. Changes in the intestinal canal were often found. Peritonitis was never discovered, but the kidneys were usually affected.

In conclusion, the author decides, on the strength of his numerous investigations, that influenza may be divided into two forms: 1, hemorrhagic; 2, pyemic or septico-pyemic form, with purulent and gangrenous inflammation of the lung tissue and freqnent metastases in other organs.—*Jour. Am. Med. Ass'n.*

"Weekly Medical Review" Pocket Reference Book and Visiting List. Perpetual. [St. Louis: J. H. Chambers & Co., 914 Locust Street. Price, 75 cents, postpaid.

This Visiting List is among the best which have been issued and is remarkably compact and yet is replete with information and contains not only sufficient space to record visits for one year but all the usual blank leaves for memoranda referring to vaccinations, obstetric engagements, death record, etc. There are, furthermore, a number of blanks provided for miscellaneous memoranda. The whole is neatly bound in tucks and will recommend itself to the physician, at sight. The price is certainly exceedingly low.

CORRESPONDENCE

Preventive Inoculations Aagaint Hydrophobia.

Editor MEDICAL REVIEW.—I beg leave to inform you of the results of the preventive inoculations against hydrophobia attained at the Chicago Pasteur Institute since its inauguration July 2, 1890.

To date 302 persons have been treated, classified as follows:

One hundred and four bitten by animals and ascertained to be rabid by the experimental proof made in the laboratory; or by the death of other persons or animals bitten by the same animal.

One hundred and twenty-six by animals recognized to be rabid by the symptoms of the disease shown during life.

Seventy-two bitten by animals strongly suspected to be rabid.

Two hundred and eighty two were bitten by dogs, seven by horses, seven by cats, three by skunks, two by wolves, one hy a mule.

The persons treated came from the following States: One hundred and eighty five from Illinois, thirty two from Iowa, twenty-three from Indiana, twenty-one from Kansas, nine from Ohio, five from Missouri, five from Arizona, four from Minnesota, four from Michigan, four from Louisiana, three from Tennessee, three from Kentucky, two from Texas, one from Wisconsin, one from South Dakota.

One death was reported among the patients treated thus giving a mortality of only 0.33 per cent.

With the best regards of the Pasteur Institute.

A. LAGORIO, M.D.,
Director of the Chicago Pasteur Institute.

Styptic Properties in Antipyrin.

Editor MEDICAL REVIEW.—I notice that Dr. F. C. Ford, of Nacodoches, Texas, is quoted in the REVIEW as having discovered styptic properties in antipyrin. A five or ten per cent solution of this drug has been in use in the General Hospital and by private practitioners in Buffalo for two or three years for the purpose of controling capillary hemorrhage. Prof. Roswell Park, I believe, introduced this use of antipyrin to the local profession. This does not detract from the credit due Dr. Ford for independent research, he has simply been unfortunate in having had his discovery anticipated.

A. L. BENEDICT, M.D.

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MEDICAL SOCIETIES

Tri-State Medical Society of Alabama, Georgia and Tennessee.

The fifth annual meeting was held in the Unitarian Church, Chattanooga, Tennessee, October 17, 18, and 19, 1893.

[CONCLUDED].

SECOND DAY — WEDNESDAY, OCTOBER 18 — MORNING SESSION.

Opened with prayer by Rev. C. G. Jones.

W. Frank Glenn of Nashville, read a paper on the

TREATMENT OF SEPTIC BUBO.

He treats the cause of gonorrhea or chancroid, and makes direct applications to the glands. He advocates rest, the application of ice, the injection hyperdemically of 1 per cent solution of benzoate of mercury, and a compress bandage. When suppuration has taken place, free incision, etc. It would be best to excise the gland as quick as it becomes inflamed. After suppuration the case must be treated as a chancroid.

R. M. Cunningham thought it best to remove the gland and, if possible, get union by first intention.

J. W. Handley had not gotten good results from ex cision.

R. J. Trippe thought extirpation of the gland the best treatment in all cases of septic bubo, even after suppuration has begun. The patient being anesthetised it is little more trouble to remove the entire gland, and thus leave a clean wound tnat will heal by first intention than to incise and curette. After extirpation, the pain amounts to nothing, and recovery is much more rapid.

H. Berlin said that a clean excision was better than incision with curetting, etc.

Dr. Glenn, on the whole, was opposed to excision except in the early stage. He does not believe in aspirating.

Dr. J. B. Murfree read a paper on the

DIAGNOSIS AND PATHOLOGY OF FRACTURES NEAR THE ELBOW JOINT.

The elbow is a hinge joint and admits of a variety of motions. If possesses the power of extension, flexion, supination, pronation and limited lateral movement. The bones that form this joint are the lower end of the humerus and the upper ends of the radius and ulna. The humerus has an expanded termination, which forms the condyles; the ulna has the olecrannon and coronoid processes; these, with the head of the radius, form the joint, and are all liable to fracture. Fractures near the elbow joint are caused by external violence, (direct or indirect, usually direct,) and muscular contractions rarely. Fractures near the elbow joint are diagnosed by the usual signs of fracture to wit: Loss of function, deformity, preter-natural mobility and crepitation. All of these may not be present, and the diagnosis may be made by discovering the broken fragment in an abnormal position. The pathology is the abnormal relation of the bones of the forearm, solution of the continuity of the bone, formation of callus, excessive or at abnormal points, inflammation of the bone, occasionally necrosis, inflammation and suppuration of the soft tssues, resulting in hypertrophy and induration, pressure or laceration of the nerves and bloodvessels. As a result, the movements are impaired and the joint is stiff or awkward. Abscess sometimes results, and sometimes paralysis.

T. Hilliard Wood, of Nashville, read a paper on

PATHOLOGY OF THE SEQUELÆ OF PURULENT INFLAMMATION OF THE MIDDLE EAR.

The doctor spoke of purulent median otitis, as a cause of mastoid periostitis, mastoiditis, meningitis, cerebral abscess, phlebitis and pyemia. He then gave the pathology of each and its symptoms. He urged attention to these sequelæ, that important preventive and curative treatment may be adopted.

G. C. Savage, of Nashville, read a paper entitled:

TREATMENT OF THE SEQUELÆ OF PURULENT INFLAMMATION OF THE MIDDLE EAR,

in which he advocated measures preventive of the sequelæ of inflammation of the middle ear, outlining his treatment: for the relief of pain, the free and frequent use of a solution of chloroform in olive oil, one dram to seven, allowing the solution to remain in the ear ten minutes at a time; when there is a discharge, the use of a warm solution of peroxide of hydrogen, letting it remain in the ear until bubbling ceases, and repeating this as long as there is any bubbling. For mastoiditis he recommended, in addition to the above, Wilde's incision, and if this did not relieve, opening of the mastoid.

N. C. Steele wanted to impress the importance of attending to cases of suppurating ears. Most of them do not live long so that insurance companies will not insure their lives.

E. L. Sones emphasized the fact that in the cases of middle ear disease death resulted frequently, and a proper diagnosis was never made.

L. B. Graddy said that until the importance of the subject was realized, patients would continue to die by the thousands annually. The use of olive oil alone is as efficient as with chloroform. Boracic acid renders the tissue a poor soil for the growth of the microorganisms and is a good remedy. Peroxide of hydrogen is harmless but of no use.

W. F. Westmoreland said that in mastoid cases the operation was postponed too long. In a certain class of cases, operation is necessary. No case of abscess of the brain ever recovered without operation. Without proper drainage toe use of peroxide is dangerous.

B. F. Travis had usee chloroform spray in his own person with good effect. He used bichloride, nitrate

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of silver solution, free irrigation and thorough drainage.

Dr. Savage said that if he had advocated nothing but the use of chloroform, he would be repaid for coming and his hearers also.

Afternoon Session.

Willis F. Westmoreland, of Atlanta, read a paper on

Treatment and Prognosis of Fractures About the Elbow.

He flexes the arm at a little more than a right angle, in a position of rest. This is the best position to prevent deformity. In fractures of the olecranon process, it is not best to extend the arm fully. He uses plaster of Paris bandage.

G. A. Baxter said that there was almost always impairment of motion and deformity. He uses passive motion after a few days, extending the arm at first, later putting it in a flexed position.

Richard Douglas said that Baxter's position was weak in first putting up the arm in extention, later in a flexed position. Passive motion was a thing of the past. By approximating the fragments, we use the best means to prevent anchylosis.

R. M. Cunningham believes in putting up the fracture, waiting for union and then breaking up the adhesions.

Dr. Murfree said that absolute rest was necessary to insure repair of the bone.

Dr. Westmoreland said that anchylosis might be produced by massage in certain conditions. All who put the limb in extension acknowledge that it was wrong by changing the position. It required more skill than most practitioners possess, to put on a plaster of Paris bandage pooperly.

Richard Douglas delivered the President's address:

Responsibilities of the Abdominal Surgeon.

As president, he advocated that a committee should select two or three members to write on selected subjects for the next annual meeting. He also thought it would be better if the society would change its place of meeting, annually. He emphasized the necessity of thorough training, cleanliness, proper diagnosis, and realization of the responsibility on the part of the abdominal surgeon.

W. E. B. Davis thought it criminal for those without experience to open the abdomen.

C. G. Savage said this would cut off ambitious young men, as they could not have the experience without operating.

Dr. Davis said he meant surgical experience, not necessarily abdominal surgery.

W. C. Townes protested that it was not necessary to have experience by operating on the living subject. Post mortems were of value.

R. M. Cunningham said that this was a specialty and required special skill, special apparatus; in emergencies the general practitioner should operate, otherwise a specialist ought to be called.

W. E. B. Davis, of Birmingham, Ala., read a paper entitled:

The Treatment of Stone in the Biliary Ducts,

in which he advocated in those cases when it was difficult to remove the calculi from the common duct without incising the duct, after making the incision if it was very difficult to stitch up the duct, and if the patient's condition would not warrant a long operation, to introduce a glass tube and pack around it with iodoform gauze without attempting to repair the duct. These cases are usually in a bad condition to stand a prolonged operation.

Paul F. Eve, of Nashville, in a paper on

Cholecystotomy,

advocated the removal of the calculi whenever detected, and described the operation.

W. C. Townes said that three cases where he had made the diagnosis of gall stones had been relieved by large doses of olive oil. If medicinal measures did not relieve, operation should be resorted to. He presented a patient on whom he had operated.

J. B. S. Holmes advocated operation if medicines failed to relieve. If the tube was concluded between the stone and intestine he would use Murphy's button to produce anastomosis between the duct and the intestine.

Richard Douglas believes that the operation of producing anastomosis between the duct and intestine a flimsy procedure.

J. A. Goggans related a case in which floating kidney had been diagnosed, but which turned out to be a case of gall stones.

R. M. Cunningham related a case where operation hap been advised, but the attacks ceased after the administration of large doses of olive oil.

W. G. Bogart had had good results from the use of oil, but would not rely upon it. He would operate in case of impaction.

G. C. Savage said that the mistake made by those who used oil was that they did not put chloroform in it.

Dr. Davis, in closing the discussion, said that these cases do not get well, as a rule, without operation. The operation should be short or the patient will die from the shock. You can never know that the last stone has passed.

Night Session.

Frank Trester Smith presented a case in which there had been

Prolapse of the Iris,

which had been partially reduced by pushing it in with instruments and the reduction completed with the use of eserine.

J. W. Handly, of Nashville, read a paper on the

Treatment of Varicocele.

The writer first speaks of the many methods and de-

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vices advanced by the medical profession in the treatment of varicocele, dividing the treatment into palliative and radical. Laid some stress upon the use of a well-fitting, properly adjusted suspensory as a most excellent palliative measure. In milder cases, besides the above, advises sound physiological advice as regards sexual habits and constipation. Mentions other palliative measures only to condemn them. Describes briefly earliest operations by Vidal de Cassis and Sir Astley Cooper, afterwards giving at length the operations of Keyes and Bennett, the ones now generally practiced.

W. Frank Glenn said that these cases were generally neglected, advised operation unless very small. If left to themselves, atrophy of the testes may result. If a suspensory is used, it should be well fitted. He sees no use in excising the scrotum.

J. A. Goggans thought that most of cases were due to masturbation, and would give general constitutional treatmen, amputate the scrotum in mild cases, and in severe cases do an open operation by ligating all the veins but one, supplemented by amputations of the scrotum.

Paul F. Eve said that the spermatic artery and vein should not be ligated or atrophy of the testicle would result. He believes in removing the redundant scrotum.

Willis F. Westmoreland removes the excess of scrotal tissue. He expects to get union by first intention.

R. M. Cunningham, had examined several thousand men and had found not more than half a dozen with varicocele.

W. C. Townes thought the condition more frequent among the wealthy, due to upholstered chairs and sedentary habits. Dr. Cunningham's cases were from lower classes. He would give tonics and use a suspensory in cases not demanding an operation.

J. R. Buist thought Dr. Cunningham's statistics due to the fact that most of his cases were negroes.

Dr. Eve stated that a United States recruiting officer had stated that out of twenty cases examined in one day, eighteen had enlarged scrotal veins. He thought his statement, that seven out of ten males had a tendency to varicocele, within bounds. All these were not operable cases.

Dr. Handly, in operating, would prefer local anesthesia unless the patient was very nervous.

L. B. Graddy, of Nashville, read a paper entitled

Etiology, Pathology and Prevention of Ophthalmia Neonatorum

The etiology, pathology the same as gonorrheal ophthalmia or gonorrhea of the urethra, being produced by the gonococci—all of these cases are produced by inoculation. Every abnormal discharge, toward the end of pregnancy, should be regarded with suspicion. These cases are inoculated during the washing. He recommended that the lids be washed by a 1 per cent solution of nitrate of silver which should be left on the lid twelve seconds, after which the eyes should be washed with clean water.

B. F. Travis read a paper on

Treatment of Ophthalmia Neonatorum.

In the early stage he advises cleansing the eyes with a boracic acid solution and the application of cold water. Later the use of strong solutions (40 to 60 grs. to ounce) of nitrate of silver in the purulent stage.

G. C. Savage, in discussing the above papers, stated that there were cases on record where pus gushed from between the lids when they were first opened. He believed that other fluids than gonorrheal would produce purulent conjunctivitis. Crede's method is effective and apparently painless.

J. B. S. Holmes thought the responsibility rested with the obstetrician.

Frank Trester Smith uses cold in the early stages by the application of ice cloths. Later, silver solution, 5 or 10 grains to the ounce, will cure the discharge, but it will take more time than with stronger solutions, but this method is safer. In rare cases the strong solution will promote ulceration of the cornea.

Richard Douglas said that the responsibility went back of the obstetrician, that it rested with those doctors who failed to cure their cases of gonorrhea.

R. M. Cunningham called attention to the fact that the negroes rarely were blind from this disease.

W. Frank Glenn and J. B. Cowan thought the disease always gonorrhea of the conjunctiva.

N. C. Steele endorsed the use of strong solutions of silver, 40 to 60 grains.

E. L. Jones had never seen a negro blind from ophthalmia neonatorum.

J. B. Murfree said that the disease was frequent in the negro in Middle Tenneseee.

L. B. Graddy uses ice compresses in the early stage. When purulency begins, nitrate of silver should be applied with a cotton wrapped on a toothpick, applied to the whole conjunctiva.

J. B. S. Holmes, of Rome, Ga., read a paper on

Movable Kidney.

Pressure on the kidney always produces nausea and faintness—this is an important point in diagnosis. If much disturbance and kidney cannot be kept in place with a bandage or an abdominal support, the kidney should be extirpated. The operation was described. We should be satisfied that the other kidney is in a healthy condition.

J. R. Buist thought many cases were overlooked. He had tried bandages and trusses without success.

Richard Douglas thought the causes not thoroughly understood.

W. E. B. Davis called attention to the difficulty of diagnosing between the gall bladder and movable kidney.

Third Day—Thursday October 19—Morning Session.

Prayer by Rev. W. J. Trimble.

On motion, the following committee was appointed,

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to whom was referred the new constitution for revision and amendment, also the recommendations of the President, said committee to repert to the Secretary, on the morning of the first day, next year, who will have changes proposed published: W. E. B. Davis, R. M. Cunningham, J. B. Cowan, W. F. Westmoreland, W. G. Bogart.

The consideration of new constitution was voted a special order of business for the third day of the next annual meeting, at 9 a. m.

Article IV of the constitution was changed so as to allow the Society to meet elsewhere.

A motion was carried that none be allowed to vote or have the privilege of the floor who have not paid dues for the current year.

The officers were elected by ballot.

On motion, the Society tendered a vote of thanks to the President for the masterly and courteous manner in which he had presided.

A committee, consisting of J. B. Cowan, W. F. Westmoreland and W. E. B. Love, appointed to draft suitable resolutions of thanks.

Afternoon Session.

The following resolutions were adopted:

For five years annually the Tri-State Medical Society has enjoyed the hospitality of the medical fraternity of Chattanooga, a hospitality that is only bounded by their opportunity to show the liberality and magnificent hospitality which particularly characterizes the Chattanooga doctor. There must be something in the atmosphere of water, or more likely in the fact of this city being surrounded by these grand mountains which has the effect to draw out and develop the better qualities and higher instincts that belong normally to every man's heart, and these magnificent surroundings have succeeded in deveioping a body of medical men that are not only an honor to the profession, but have and are now giving to this beautiful city a reputation that has become national.

"The Tri-State Medical Society feels to-day that we have unloosed the cable and from this day forward are afloat and will have our annual home in Georgia, and then Alabama, that we fully appreciate the sensation of a son leaving his paternal home and going out into the world to try his fortune. We fully appreciate the importance of this step, and as we leave the home nest and wander in other lands our thoughts, our affectionate remembrance and our prayers will center here, and our thanks and gratitude and best wishes for the medical fraternity of Chattanooga will ever grow brighter and brighter as the years go by. Be assured that in the heart of every member of the Tri-State Medical Society the memory of the many kindnesses and splendid hospitality shown us will ever remain a green spot, the memory a thing of beauty and a joy forever."

Y. L. Abernathy, of Hill City, read a paper on the

Treatment of Typhoid Fever.

The author claims that it is impossible to diagnose between typhoid and continued malarial fever in many cases. He believes in an aggressive form of treatment, and advocates the use of quinine and mercury in these cases. He also relies on hydrotherapy by the Brand method.

J. B. Cowan could not endorse the use of quinine. His sheet anchor is alcohol, using it as coal in a grate, to allow the man to burn this instead of burning the tissues. He gives salicylates in small doses—three and a half grains. He had not seen a case of typhoid fever in fifteen years.

G. T. Prince said that a typical case of typhoid was rarely seen. The treatment must be varied according to the type. In perforation, laparotomy should be performed. By using potass. bromide first, he could use quinine.

Dr. Reeves, in discussing the paper, formulated typhoid fever as follows: An acute contagious febrile affection derived from an antecedent case of the disease and depending for its communication from person to person upon the presence of a specific micro organism, which is believed to be of well-known morphological characteristics—a bacillus—and which can be cultivated outside the human body. The disease prevails less frequently in tropical and sub tropical countries than in the temperate zone, is both endemic and epidemic in its visitations; attacks, preferably, young persons and those in middle life; is of long duration, but varying between ten and forty days beyond the prodromic period, which may cover from one to ten or even twelve days. There is profuse diarrhea, or, at least, a relaxed state of the bowels, with "pea-soup" or "ochre-colored" stools; and at all stages a marked susceptibility to the action of laxative medicine; intestinal hemorrhage in many cases, and in a few perforation of the bowels; epistaxis, either slight or profuse; tympanites, with gurgling produced by pressure over the ileo-cecal valve; dullness of hearing, with mental hebetude, or morbid vigilance; headache, disappearing during the second week; delirium either mild or violent, with *subsultus tendinum*; rose-colored lenticular eruption during the second week, coming out in crops and disappearing in the same order; fever-curve showing steady elevation of from one to three degrees in the evening with a fall of the same number of degrees in the morning for the first four or six days, and unlike the curve of any other acute febrile or inflammatory disorder; cough and bronchial rales; singular prostration of muscular strength; early heart-failure and a dicrotous pulse. The tongue soon becomes dry, and shows, in grave cases a brown stripe in the middle, with *sordes* on the teeth and gums; in fatal cases, death occurs during the third or fourth week, with the constant and characteristic lesion of the small intestine involving Peyer's glands; and with enlargement of the spleen. Convalescence is tedious; true relapse is not infrequent, and the disease affords as perfect immunity from subsequent attack as does scarlet fever or small-pox.

P. L. Brouillete believes the cold bath the best anti-

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pyretic, prefers using first a tepid bath and reducing the temperature of the water. Quinine must be given in large amount within an hour to get antipyretic effect, as it is eliminated.

Willis F. Westmoreland said that tepid baths were less depressant than the cold baths.

R. M. Cunningham said: 1. We have typical typhoid fever. 2. We have atypical typhoid fever. 3. We have typical malarial fever. 4. We have atypical malarial fever. 5. We have an unknown fever that I call continued. Baths best antipyretics. Whiskey and strychnine best stimulants. 424 cases observed in four years. 30 typhoid—10 deaths, 8 complicated. 178 continued—2 deaths, both complicated. 176 uncomplicated fevers—no deaths. Does not believe in antiseptic treatment. As a routine treatment he uses the mineral acids.

Dr. W. C. Townes read a paper entitled:

Pathology and Tretment of Goitre.

This paper was suggested by observing many cases while "tramping" among the Alps of the Tyrol and Switzerland this last summer. The author claims the gland to secrete a colloid substance which aids in blood making. Etiology of goitre is not established. He describes the histology and the naked-eye appearance of the gland. The tumors are benign—are hypertrophies and hyperplasias which undergo mucoid changes. May become cystic, then the growth is quite large. The treatment is prophylactic, with iodine of some form in the beginning. Later, the results of many observers show that the removal of the goitre should be practiced. Suggests a trial of the ingestion of the gland of the sheep, quoting from Kinnicutt.

The Secretary was voted a salary of one hundred dollars for the current year, after the other bills are paid.

Night Session.

A paper by C. W. Barrier, of Columbus, Ga., was read, entitled

The Elastic Dressing Applied to Incomplete Anchylosis of the Knee,

of which the following is a synopsis: The elastic dressing applied to incomplete anchylosis of the knee. Report of case. Description of the elastic dressing, with method of using it. Indications of treatment of such a case: 1. Arrest the atrophy of the synovial membrane and restore it to its function. 2. Breaking up existing adhesions and prevent the formation of others. 3. Restore the tendons of the hamstrings to their normal length. 4. Arrest of the atrophy of the tendon of the quadriceps and stimulate it to antagonize the hamstrings. Conclude by showing how these indications are met better by the elastic dressing, than by an operation for a fixed dressing. Query: If such dressings were more frequently applied in incipient anchylosis, would there be a less number of cases of complete anchylosis, and still fewer radical operations for same?

R. J. Trippe had had good results from breaking up adhesion under an anesthetic. This, however, may have to be repeated. Anchylosis should be prevented, if possible, always.

J. B. Cowan said that many of these patients were neglected, and as a result there were many deformed joints.

Willis F. Westmoreland insisted on the importance of prevention. A trivial injury may result in destruction of the joint.

H. Berlin related his experience with the

Action of the Galvanic Current on the Uterie Tissue.

The paper contains the results of experiments. A current was passed through the uterine tissue which was then subjected to microscopic examination. In one case the experiment was made on the living subject previous to hysterectomy, in the other cases the cadavar was used. He concluded that the only effect was the destruction of the mucosa and that curetting would accomplish the result much more quickly.

Geo. R. West said that according to experiments electricity acted not only at the poles, but also throughout the tissue.

W. E. B. Davis believes that electricity has its place in gynecology, but that many claim too much for it. Curretting is preferable, although the same result might be accomplished in many cases of electricity.

J. B. Cowan thought the current was used in a milder form than to produce necrotic tissue.

W. F. Westmoreland, after spending much for electrical apparatus, had concluded to let it alone in most cases.

G. W. Drake said that electricity had accomplished most by those who had studied the subject. It should not be condemned from the reports of those who did not understand its use.

J. P. Stewart thought that there was no doubt of the tonic effect of electricity.

H. Berlin said that he only wanted to prove the microscopical effect of the current and had found necrosis; had no effect from Faradism.

J. B. Cowan, of Tullahoma, Tenn., made an address on

Medical Ethics.

He spoke of the violation of the code in consultations. It is the duty of the medical societies to lift up the profession. We get legislation to protect the people and to elevate the profession so that the code could operate on the members of it. He called attention to the splendid organization of the profession in Alabama.

W. F. Westmoreland thought the profession had reached that point where the code of ethics as a published document should be abandoned.

G. A. Baxter said that a consultant could steal a patient within the code of ethics.

J. R. Rathmell believed in a written code. The code is a statement of the principles which are the written result of the experience of the profession.

J. P. Stewart said the written code was of value to protect us from those who violate it.

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G. W. Drake said that any argument for abolishing the code would apply equally to any written law, even to the word of God. We object to consulting with irregulars, not on account of their method of treatment, but on acconnt of advertising.

Y. L. Abenathy stated that we should follow the golden rule. A code is needed for violators of the law.

The following were read by title: "Report of Psychical Science, Chicago, 1893," John E. Purdon, Cullman, Ala.; "The Significance of Albumen in the Urine in Pregnancy," E. T. Camp, Gadsden, Ala.

Adjourned to meet in Atlanta, on the secoud Tuesday in October, 1894, at which meeting the proposition to change the name to "The Southeastern Medical Society" will be considered. This will embrace the territory east of the Mississippi and south of the Ohio.

Bacteriologic Examinations Regarding Membranous Croup, by the New York City Board of Health.—Dr. Herman M. Biggs, Chief Inspector of Contagious Diseases, under the New York City Department of Health, has made a provisional report concerning his bacteriologic work for four months (*Jour, Am. Med. Ass'n*). During that time, Dr. Biggs has had occasion to examine thirty-six reported cases of membranous croup. In all these cases, the membrane was limited to the larynx, or only slightly extended into the pharynx. There was found, in thirty of these cases, the diphtheritic bacillus of Loeffler, often quite abundantly. These cases were, therefore, really cases of laryngeal diphtheria. In the remaining six cases the Loeffler bacillus was not found. These were, therefore, cases of catarrhal pseudo-membranous inflammation of the larynx, and are analogues of the non diphtheritic cases of pharyngitis marked by a similar pseudo-membranous exudation. In none of these six cases of croup, was the laryngeal disease preceded or followed by pharyngeal inflammation having the Loeffler bacillus in the exudate. In five of the cases of laryngeal croup, having the bacillus in the membrane, there was a pharyngeal diphtheria both before and after the laryngeal trouble. In fifteen of these cases pharyngeal diphtheria neither preceded nor followed the attack. Three of the cases were preceded by pharyngeal diphtheria, while seven were followed by that complication. So that during the last four months nearly eighty-four per cent of the cases of reported croup, referred to the Department for examination, proved to be genuine diphtheria. Acting upon this report, the Department will probably adopt a rule calling upon physicians to report all cases of laryngeal croup, and to isolate the sick from the well.

Scrofula.

℞ Hydroleine, - - - - - - - - - fℨvj.

Sig. Two teaspoonful mixed with twice the quantity of water to be taken after each meal.

NOTES AND ITEMS

Salophen in Tonsilitis and Coryza.—Salicylic acid and its compounds have been pronounced specific for tonsilitis; and they are undoubtedly of great utility. In one case I gave five grains of salophen every two hours; and found it fully equal to the above named remedies. In a case of headache with fever, from "catching cold" at the menstrual period, salophen was given in doses of ten grains, every two hours. The patient was better next morning, and on the next, the menses returned.

The Study of a Fatal Case of Essential Tachycardia was the title of a paper by Dr. John C. Sexton, of Rushville, Indiana, in which he detailed the symptoms and clinical features of a case of essential tachycardia in which the patient had died after thirty-five days' illness. A peculiar feature of the case had been the response to manipulative efforts, electrical and others, to produce stimulation of the pneumogastric nerve and thus to slow the heart. The paper then reviewed the ordinary symptoms of heart hurry as presented in the literature of the subject, and some further remarks were made concerning the causation, symptomatology, and treatment.

Sir Joseph Lister on Antiseptics.—At the first meeting for the winter session of the Medical Society of King's College, on October 27, Sir Joseph Lister read a paper on "Essentials in Antiseptic Treatment," in which he pointed out how greatly procedure had been simplified by the recognition of the truth that microbes, in the attenuated condition in which they are present in the air, are effectually disposed of by the natural antiseptic action of the living body; so that the atmospheric dust may be entirely disregarded in operating. But simple as are the means now employed, Lister insisted upon the necessity for earnest vigilance in their application, and he cautioned his hearers against lightly abandoning means which experience has proved to be thoroughly trustworthy.—*Med. Times and Hosp. Gaz.*

Venereal Disease Among the Troops in India.—According to the recently issued report of the Army Medical Department, the European garrison in India numbers 60,000 men. In Bengal alone the men invalided from venereal diseases, primary and secondary, constituted 29 94 per 1,000 of the strength, representing a continuous loss to the Service of 1,203 men, and when the men invalided from diseases of venereal origin, such as bubos, etc., are added to this total, the ratio is raised to 30.9 per 1,000 of the strength. The same story is true of the Madras Presidency, where 31.95 per 1,000 are constantly invalided by venereal disease, and in Bombay, where 29.0 per 1,000 are similarly incapacitated. This means a fearful loss to the

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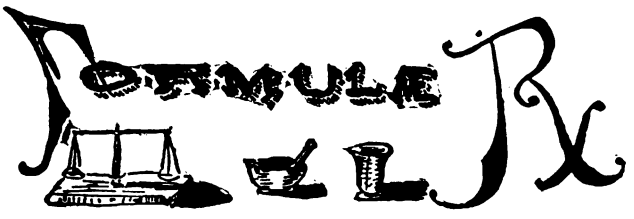
country, and it is to be regretted that the exigencies of party politics prevent any attempt on the part of the authorities to stamp out venereal diseases.

John Hunter.—To honor and cherish the memory of its great men, says the *Medical News*, adds strength and dignity to a profession. One hundred years ago, on October 16, in John Hunter there died the greatest anatomist and pathologist the world has seen, the man in whose faculties reason and observation were blended as they had not been since Aristotle. The creator of the science of comparative anatomy, the founder of scientific surgery, a physiologist of such wide observation that his researches covered the whole range of animal and vegetable life, the originator of the modern science of pathology, he stand in the history of our profession with a genius nihil simile aut secundum.

Hunter not only remodelled the very fabric of our knowledge of the structure and functions of living beings in health and disease, but some of his brilliant conceptions in geology and embryology foreshadowed, indeed actually express, ideas that we regard as very modern. Von Baer's law that the embryo in development pssses "through life of lower phase," he expressed in so many words. A broad, comprehensive survey of nature, in which, though "the beauty of the plan and the necessity of the sequence are not always perceptible," all things in order move, led him to study aberrant forms and deviations from normal structure. Buckle has so clearly drawn Hunter's position in this relation that we give his words: "To generalize such irregularities, or, in other words, to show that they are not irregularities at all, was the main object of Hunter's life, and was the noblest part of his mission. Hence, notwithstanding his vast achievments in physiology, his favorite pursuit was pathology, where, the phenomena being more complex, the intellect has more play. In this great field he studied the aberrations of structure and of function in the vegetable as well as in the animal world. * * * By sweeping through this immense range of thought his mind attained to such commanding views of the philosophy of disease that in that department he is certainly without a rival. As a physiologist he was equalled, or perhaps excelled, by Aristotle; but as a pathologist he stands alone, if we consider what pathology was when he found it, and what it was when he left it."

In an age of differentiation we miss these broad-minded men, who could both see and think. The hedgerows between which we walk permit of progress and of vision in one direction only. Beyond lie pleasant fields, into which the enormous extensions of modern science make it increasingly difficult for us to wander; but the study of the works of a great master like Hunter will not only lead us (whether anatomist, surgeon, physiologist or pathologist) into pleasant ways of thought, but will even add a cubit to our professional stature in the very remembrance that such a man practised the same art as ourselves.



Insomnia of Drunkards.

℞ Neurosine, - - - - - - - one bottle.
Sig. Teaspoonful repeated as necessary.

Retention of Urine.

℞ Tritica (S. & H.). - - - - - one bottle.
Sig. As directed.

Insomnia of Hysteria.

℞ Sulfonal, - - - - - - - - - ℥ss.
Divide in dos. No. 2.
Sig. One powder at bed time.

Acute Proctitis.

℞ Sennine, - - - - - - - - - ℥j.
Decoct. semin. lini, - - - - - - fl℥vj.
Tinct. opii, - - - - - - - - - ♏j.
M.
Sig. Inject into the rectum twice a day.

Bronchial Catarrh.

℞ Eucalyptol (Sander & Son), - - - - fl℥iij.
Creasot, - - - - - - - - drops, xxiv.
Alcohol, - - - - - - - - - fl℥j.
Syrup tolutani, - - - - - - - - fl℥v.
M.
Sig. Teaspoonful three times a day after meals.

Goitre.

℞ Elixir Six Iodides (Walker-Green's), - one bottle.
Sig. Teaspoonful three times daily after meals.

℞ Iodin, - - - - - - - - - - ♏j.
Potass. iodid., - - - - - - - - - ℥j.
Aquæ destill., - - - - - - - - fl℥j.
M.
Sig. Inject in the tumor once a week very slowly.

Anemia and Chlorosis.

℞ Horsford's Acid Phosphate, - - - - - fl℥j.
Quinine sulph., - - - - - - - - ℥ss.
Strychn. sulph., - - - - - - - - gr.ss.
Ferri pyrophosph., s - - - - - - - ℥j.
Syrup, - - - - - - - - - - fl℥j.
Aquæ, - - - - - - - - - fl℥ij.
M.
Sig. Teaspoonful in water three times a day.

La Grippe.

℞ Antikamnia, - - - - - - - - - ℥j.
Hydrarg. chlorat. mite., - - - - - gr.j.
Sodii bicarbonat.,
Sacch. alb., - - - - - - - - aa ♏j.
M. F. pulv. Divide in dos. No. 12.
Sig. One powder four times a day.

℞ Andunea, - - - - - - - - - ℥ss.
Sacch. alb., - - - - - - - - - ♏j.
M. F. pulv. Divide in dos. No. 6.
Sig. One powder every three hours.

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Highly Pleased with Its Effects.—John A. Gordon, M.D., of Healdton, Ind. Ter., writes as follows to the Dios Chemical Company: "I have used Dioviburnia and am happy to inform you that I am highly pleased with its effects."

Freligh's Tablets are still considered by a large number of the profession as the *facile princeps* of nerve tonics and the results which have been attained by their aid are truly marvellous, in many instances. Messrs. I. O. Woodruff & Co have done a real service in introducing them.

In the Treatment of Nervous Diseases and General Debility, McArthur's Syrup Hypophosphites demonstrates its restorative powers. Here it is not the stimulating action of the remedies usually classed as tonics that is needed. The organic powers of the system are already taxed to their utmost ability to carry on the physiological processes of life. The Hypophosphites of lime and soda gives the much-needed effect in these conditions—not that of a stimulant by irritation, but that of a true nutriment to the starving tissues. Its tonic effects are permanent as they are the effects of a richer blood supply, bringing healthy food and oxygen to the tissues. Thus the patient is gradually brought up to his normal condition.

Voluntary Testimonials from such eminent physicians as Paul F. Munde, J. Lewis Smith, Thos. E. Satterthwaite, Graeme M. Hammond, George B. Fowler, Stephen Smith Burt, A. Jacobi, Mary Putnam Jacobi, B. Sachs, and scores of others, who are using Rudisch's Beef Peptome (Sarco Peptones) in their private and Hospital Practice, should certainly convince the most sceptical practitioner of its unequaled value as a food for invalids, and patients with faulty or impaired digestion. Its palatability, its rapid assimilability and the fact that it contains all the nutritive elements of the best lean beef insure its superiority over all other forms of Beef. Physicians are requested to write to the Rudisch Co., Sole Manufacturers, 317 Greenwich St., New York, for free samples, pamphlets, Testimonials, etc. Mention this journal.

Greatly Pleased with Dioviburnia.—E. Christiansen, M.D., of Julesburg, Colo., writes as follows to the Dios Chemical Company: "I have been greatly pleased with your Dioviburnia; in fact, the best testimonial that I can give is that my druggist, at my request, keeps it as regular shelf-goods, and would not think of running out of it."

Whooping-Cough. — In whooping-cough, laryngismus, stridulus, headache from exposure to the sun's heat, intestinal pains of children, convulsions from teething, Neurosine will prove both convenient and reliable. It will be found very useful in the nervousness and restlessness of fevers. In intermittent fever the chill can often be aborted by its use.

The formula being accurately given and with the positive assurance of its containing only the chemically pure and carefully selected drugs, Neurosine can be prescribed with confidence by the physician when in his judgment the indication demands a remedy of such character.

Cod-Liver Glycerine.—She Superintendent and Surgeon in charge of the St. Louis Hospital, Dr. H. Marks, announces that Cod-Liver Glycerine is now used in that institution. Its power to mix uniformly in any proportion, in all prescriptions, or to mix with water and spirits without separating on standing, renders it the most desirable reconstructive in the convalescent period of difficult surgical cases, or acute diseases attended with emaciation; while its digestive properties insures its therapeutic action. See advertisement.

SEARCY, ARK., November 20, 1893.

Dios Chemical Co., St. Louis, Mo.—,

GENTLEMEN—The sample of "Sennine," the New Antiseptic, I tried in a case of old sore leg with very gratifying results, the fetor disappearing at once on application.

W. L. LEISTER, M.D.

Combination of Drugs.—The Elixir Six Aperiens consisting as it does in a palatable form of cascara sagrada, May apple, dandelion, butternut, Alexandria Senna, Rochelle salts with aromatics, operates without some of the disadvantages were a lesser number of the ingredients administered, proving that the united action of laxatives are often improved by combination. Every physician knows that the officinal Pil. Cathartic Co. consists of six purgatives which make a popular cathartic. We know that calomel given alone acts feebly on the kidneys, but along with digitalis and squills, it is the most powerful known diuretic.

Take another instance ipecac and opium have each diaphoretic properties, but when combined it makes Dover's powder the diaphoretic properties of which are increased more than fourfold and in fever we all know the addition of aconite to the opium and ipecac still increases the remedial properties. We might go on illustrating the value of combinations and certainly in no instance is it better exemplified than in the Elixir Six Aperiens which acts on the entire alimentary canal and is peculiarly adapted to children and pregnant women on account of the mildness and will be found a specific in constipation.

Littell's Living Age for 1894.—Lovers of choice literature will feel themselves repaid for a subscription to this rare and valuable old periodical. Closing its fiftieth year, and entering upon its 200th volume, it was never better than now, and it enters the new year with renewed vigor and vim.

Elaborate reviews of recent publications; the latest results of scientific research; biographical sketches of eminent characters; travel, exploration, literary criticism and every phase of culture and progress in the European world; with fiction and choice poetry: all these make up "The Living Age."

In addition to the production of the leading British writers, "The Living Age" will publish during 1894, copyrighted translations of noted French and German authors. A story of thrilling interest entitled Manette Andrey—a Picture of Life During the Reign of Terror, from the French of Paul Perret, will be begun in the first January issue, which is the opening number of a new series and begins the 200th volume of the magazine.

A curious and captivating work, also from the French, will follow Manette Andrey, while early in the new year will appear a charming short serial, by Ernst Eckstein, the famous German romancist.

The publishers offer most generous inducements to new subscribers. For $8.50 they will send "The Living Age," postpaid, and a set of Ridpath's famous History of the United States, in two volumes, bound in maroon cloth; or, for $9.00, the Personal Memoirs of Phillip H. Sheridan, U. S. A., also in two volume, handsomely bound in half-seal. These are extraordinary offers, for the books are no cheap reprints or shop-worn copies, but new works published at $5.00 and $9.00 a set, respectfully. The prices named include postage on "The Living Age" only.

New subscribers for the year 1894, remitting before January 1, will receive the weekly numbers of 1893 issued after the receipt of their subscription free.

This magazine at $8.00 a year is cheap. Samples copies with descriptive and club circulars may be obtained by sending 15 cents to Littell & Co., Boston, Mass.

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Average Weekly Issue, 10,000 Average Monthly for the Year, 43,333

MEDICAL REVIEW.

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ORIGINAL ARTICLES

Relaxation, a Necessity to Render Living Complete, and Prolong Life.

BY E. H M'BRIDE, M D, OF SPRINGFIELD, MO.

President's Annual Address before the Southwestern Medical Association, held at Springfield, Mo., October 1893.,

On the very threshold of our subject, we are confronted with uncertainty growing out of the multitudinous views of men as to the object of life.

What is really the ideal life?

In the language of a notorious politician hailing from Texas, we ask, what are we here for?

The answers that would be given, would be as varied as are the stand-points from whence men answer.

There is a large and intelligent element in society, who would answer, that the chief aim of man should be the accumulation of wealth. In short, money making. In plain English, work.

Such people, as a rule, believe that within the circumference of a dollar, is confined about all that there is in life that is worth living for.

Some people believe, and appear to practice a total self abnegation, denying themselves all pleasure except what arises from mere eating, sleeping and drinking, to supply the absolute wants of the body, live lives of ostensible celibacy, and social asceticism; and live and die, without ever feeling any of the keener carnal pleasures, which are a part of complete living, because of a spiritual delusion which takes the form of religious fanaticism.

There are still others who take a more rational, practical and materialistic view of life; who are less given to the ideas of asceticism, who just as honestly believe, that we have accomplished about all in life that is attainable, if we make perfect and complete our own living, and shed the sunlight that is sure to be reflected from a happy and contented life, on those of our fellow beings, whom chance has thrown in our circle.

One man takes keenest pleasure in what, to another, seemingly equal in cultivation and intelligence, would be loathsome and disgusting. Some really love and enjoy life, while others think it not worth the living, but go on quietly doing their part under protest, until death claims them.

There are others who believe the same, and are going at a fast gait at no matter what expense or outrage on nature; and who seem to adopt every possible means to curtail life's duration short of actual suicide, and do in due time take a change of venue from the bars of earth to the bar of the "Great I am".

With these discordant views as to the aims and purposes of life, the query naturally suggests itself, is longevity desireable?

I answer from my stand-point, that since in my opinion the real and chief aim of life, and all that can ever be attained in life, is to make our living thorough and complete, and reflect in a material way our sunlight on our less favored brothers, and aid them to lessen the evils of their lives, that longevity is desireable, both from a moral and material stand-point.

As men claiming to be scientific, we know almost nothing of the laws that govern our own lives.

We can only judge from manifestations.

Breathing, sleeping, eating and certain activities, are manifestations of life; yet we are as unable to explain the law itself as are ministers of religion, to locate the part of the universe in which Heaven is situated; or to give us any positive information relating to the life of immortality.

Since we have not one single item of positive knowledge as to where will be our abode, and what our state after we have shuffled off this mortal coil; then for that if for no other reason, I would in the language of Hamlet, prefer to bear indefinitely the evils we have, rather than fly to those we know not of.

Man ought to so live, as to keep in perfect order every organ and member of his body, regulating his labors, hours of rest, and his ingesta so far as he may have knowledge, in such a way as to supply all the needs of the body, so as to husband the strength of his digestive apparatus, upon the integrity of which, more than any other organs depend, his chance for a long life, perfectly lived.

It is a popular fallacy that the savage or primitive man with the crude habits of the semi-savage, has greater powers of endurance and greater longevity, than the man who is more highly developed by intelligently applied laws of civilization, yet such is not the fact.

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The savage man lacks the power of constant application. Spurred by hunger, danger or revenge, he can exert himself energetically for a time, but his energy is spasmodic.

Monotonous daily toil is to him impossible.

There is lacking that moral force which comes from civilization, and cultivation, without which no determined and persistant effort can be put forth.

It is otherwise with the more developed man. The stern discipline of social life has gradually increased the aptitude for persistant industry, until among us, with many, work has become a passion.

The contrast of nature has another aspect.

The savage thinks only of present satisfactions, and leaves future satisfactions uncared for.

Contrarywise we, who are more civilized, largely pursue a future good, almost ignoring what good the passing day offers us; and when the future good is gained, we neglect to enjoy it, while striving for some still remoter good.

Every observant scientific man must be struck with the number of faces on the streets of all our cities, which tell in strong lines the burdens that had to be borne.

Again all must have noticed the number of prema turely gray haired men. It is said by authority, that our American begins to turn gray about ten years younger than his English brother.

Look again at the number of business and professional men and politicians, who hardly yet in middle life, show evidence of nervous overstrain; and some even with nervous collapse, due to stress of business; men who have killed themselves by over work, or have become permanently incapacitated, or have wasted long periods in endeavors to recover health.

I know that I but echo the opinion of all observant men, that immense injury is being done by this high pressure life, the physique is being underminded. That great thinker, and poet "Emerson", says, in his Essays on the gentleman, that the first requisite is, that he shall be a good animal.

The requisite is general in its application, and should be extended as well to the common citizen, as to the gentleman.

No one can persistently outrage nature. Sooner or later the old lady will quietly suppress him who treats her law disdainfully, and will leave the world peopled by the descendants of those who are not so foolish.

Beyond this immediate mischief, there are remoter mischiefs.

Exclusive devotion to work has the result that amusements cease to please; and when relaxation becomes imperative, life becomes dreary from lack of its sole interest, the interest in business.

There is a remark current in Europe, that when an American travels abroad, his aim is to do the greatest amount of sight seeing in the shortest possible time.

We all know that the remark is true, and is applicable to the American who goes sight seeing in his own country.

It seems that with us the satisfaction of getting along well and the greed for money devours nearly all other satisfactions.

An Englishman will derive a whole weeks pleasure from seeing Niagara, while most Americans will go one day, and leave the next.

Froissart said, that the English in his day took their pleasures sadly after their fashion.

Were he alive, he would say of Americans, that they take their pleasures hurriedly after their fashion.

There is not that complete abandonment to the moment with us, when we take rest and pleasure, that is requisite for full enjoyment, and this abandonment is prevented by our ever present sense of multitudinous responsibilities, so, that beyond the serious physical mischief caused by over work, there is the future mischief that it destroys what value there would otherwise be, in the leisure part of life.

Nor do the evils end here. There is the injury to posterity.

Damaged constitutions reappear in our children; and we entail on them far greater evils than great fortunes yield them good.

When life has been duly rationalized by science, it will be seen that among a man's highest duties, care of the body is the most important; not only out of regard for personal wellfare, but also out of regard for his descendants.

His constitution will be considered an entailed estate, which he ought to pass uninjured, if not improved, to those who follow, and it will be held that millions bequeathed by him will not compensate for feeble health and decreased ability to enjoy life.

Once more, there is the injury to fellow citizens taking the shape of undue regard for competitors.

A man who makes himself a slave to accumulation, absorbs an inordinate share of the trade or profession he is engaged in, makes life harder for all others engaged in it; and excludes from it many who might otherwise gain competencies.

The truth is, we need a revised ideal of life.

Look back through the past or abroad through the present, and we find that the ideal of life is variable and depends on social conditions.

Every body knows that to be a successful warrior was the highest aim among all ancient people, and is still among many barbarous people.

Industry was thought only fit for slaves and people of low degree. We have evolved a different ideal now, with the decline of Militant activities, and the growth of industries under more benign governments; the occupations once thought disgraceful have become honorable, the duty to work has taken the place of the duty to fight.

The latter ideal is as well established now, as was the former in ancient times.

Practically, business has been substituted for war as

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the purpose of existence. Is this modern ideal to survive forever? It is to be hoped not, all things else are changing, and we hope this ideal will also be changed. As much as Bellamy's Looking Backward has been ridiculed, when looked at rationally, it is the true solution of the question of living.

Life is not for learning, nor is life for working, but working and learning are for life.

The primary use of knowledge is for such guidance of conduct under all circumstances, as shall make living complete.

All other uses of knowledge are secondary.

It scarcely needs saying, that the primary use of work is that of supplying the material and aids to living completely, and that any other use of work is secondary.

But in most men's conceptions, the secondary has usurped the place of the primary.

Every where in human affairs, we observe the tenden cy to transform the means into the end.

All see that the miser does this when making the accumulation of money his sole satisfaction, for he forgets that money has no value except to purchase satisfactions. It cannot be used as food, drink or raiment.

Though not seen so plainly, it is nevertheless a fact, the same is true of the work by which the money is accumulated, that industry too, mental or bodily, is only a means, and that it is as irrational to pursue it to the exclusion of that complete living, as it is for the miser to accumulate money, and make no use of it.

Hereafter when this age of active material progress has yielded mankind its benefits, there will, I think, come a better adjustment of labor and enjoyment.

We have enough preaching on the subject of work, what we want, is some gospel on relaxation.

The efforts that are being made by the labor elements sometimes sneeringly called socialists, with a view to shortening the hours of work, and increasing the hours of living properly, are in the interests of humanity; and I trust that a rapidly approaching higher civilization, and more enlightened and liberal views on the subject, will ultimately crown their efforts with success.

I wish them good speed.

Human intelligence, with the ability to be just and grateful, has not yet arisen to the high plane, in the Legislative Hall, nor in the individual, to fully understand the value and appreciate, the full worth of preventive means or preventive medicines, and as a consequence, we as scientists, are not rewarded materially for our efforts in that direction.

Our living under our system of practice depends on the number of our patrons who are actually, or supposedly ill, and hence we are never compensated for services along the line of preventive means, but have to rely on treating the sick for a livelihood.

For that reason this is not a subject that presents much that is fascinating to the physician, in so far as it relates to the benefits of relaxation to his patrons.

But to the physician personally to be able to live well, to live sound, and to live long is a very interesting subject.

I hardly think any of us will live to see the day, when people will be willing to give us good fees, for advice that will prevent them from getting sick, or even that will prolong their lives, under our system of practice whoever serves faithfully the calling of medicine, serves a jealous mistress, and his life is no bed of roses.

This system has been handed down to us and shaped for us without our knowledge or consent, it is a legacy of both plessant and disagreeable conditions.

Much in humanity is practiced by our patrons on the physician.

There is scarcely ever a night call that we get after bedtime, baring only obstetric practice, that could not just as well wait till morning, or better still have called us before we retired.

Yet you have to accept it or get out of the profession, since we cannot have any hope that during our time there will be evolved a less irksome system.

Like the ideals referred to, it will take time and a higher order of intelligence to evolve a change for the better.

A more liberal conception on the part of the public, as to what is justly due the physician, could by gradual education greatly improve present conditions; a better understanding of the correllative relation of patient or patron to physician.

It is said that the "heathen chinee," whom we scorn, pays his doctor by the month or year, to keep him well, and that so soon as sickness begins the fees end.

We laugh to scorn such a system, and yet there is more that is rational and practical in it than in our own.

If all physicians were intelligent and just, and not possessed of inordinate greed, we could in a great way so far as town and city practice is concerned gradually educate our patrons to be more considerate of our comforts, and teach them to procure our services during the hours when we are not asleep.

But it will never be, too many incorrigable individual doctors, too many discordant schools, no possibility of ever being able to discipline an unruly member.

Then it seems that the only way out of it is for every man who thinks as I do, to do the best he can, take the bull by the horns, and as far as concerns the caring for his own health, living completely and inducing longevity, just go right ahead, and do as he thinks proper, and leave the result to chance.

I am convinced that the public, like lovers, value most that which is hardest to attain. The physician who is ready to rush madly at all hours and never ask compensation for his work is sure to have plenty to do, but is not much sought by the class that the material and which aids to make living complete, comes from.

It is hard to adapt an economy so complicated as the human system to the multitudinous irregularities of the physicians life; but by a forced system of our own, in

relation to hours of work, and hours of rest, and living.

We can do much towards alleviating the evils and sweetening the good.

Every sensible man who has the means, will take the opportunity to recuperate himself by frequent pauses for recreation.

He does not defer his period of pleasure until the closing minutes of a worn out life.

He is too wise to expect impossibilities of nature, the recuperation of an utterly exhausted body.

He has had his comforts and enjoyments in due season, and is grateful to his creator, that he possesses the means to procure all the comforts of life, which he wisely uses to prolong his existence.

It is a fact known to all, that now and then, men of dissolute habits, who on the surface appear to live for the sole purpose of self debauchery, oftentimes run to extreme old age, while the reverse is observed of men who are apparently the antipodes of the former class.

But we cannot without an intimate acquaintance, with the every day habit and peculiarities of the two, decide as to the correctness of any law, as to proper living based on their short or long lives.

Oftentimes there lies at the bottom beneath the placid and crystal waters, reeking and putrid mud; while the seething dashing muddy waters that rush roaring down the swollen stream at intervals, are for purposes of cleansing and leaves the channel disinfected, and very soon the sweet pure waters gently flow in the brook where only a few hours before, was a rushing cataract of stench.

The well kept and moderately worked horse, in the hands of a kind master, all know, lives longer, and feels better, is better, and is pleasing to look at. While the poor flogged scared half-fed, worked to death horse is miserable, unhappy while he lives, and fortunately, and mercifully is short lived.

In the life of the well kept and moderately worked animal is the best illustration of a perfect and complete living.

Poor man, the king of animals, when he lives, without a due conception of what living should be, is unhappy, dissatisfied with life, and its environments notwithstanding the amplitude of comforts that a beneficent nature has spread on earths table for his enjoyment.

He lives only half way, is a slave to over work, worry, nerve strain, and unnecessary responsibilities, lives a dyspeptic life in discontent, and dies in dread that after life's fitful fever, there is another hell in store for him.

Could there be a more beautiful sentiment, and a truer philosophy on living, than the gem of Mr. Bryant, the Poet, which says "So live, that when thy summons comes to join the innumerable caravan, that moves to that mysterious realm where each shall take his chamber in the silent halls of death. Then go not like a quarry slave at night scourged to thy dungeon, but soothed and sustained by an unfaltering trust, approach thy grave like one who wraps the drapery of his couch around him, and lies down to pleasant dreams."

I have intentionally made this an abstract paper leaving details to the judgement of such as desire to practice its teachings knowing that every man is a law unto himself, and best knows, if he will but do, what is best for himself.

Besides the constant daily complete living in connection with our unavoidable routine, that I have referred to. I am a strong advocate of, and practice every year the annual relaxation idea, of leaving my patients and my cares, annoyances and responsibilities for four to six weeks, to take care of themselves, and of going away to change climate and environments, and to rest in sweet enjoyment, away from friends, work, and cares, seeking pleasures and satisfaction, enjoying a change of diet, etc., and when I have basked in the sunlight of some place suited to my taste, at a season of the year that a rest is most needed, for a month or more, in complete abandonment to the hours that pass, forgetting for the time that I ever had a responsibility, or annoyance.

I return to my home and work refreshed mentally and physically, feeling that there is yet much to live for.

I am sure that the vacation benefits my patients also.

Gentlemen I thank you for your attention, and again I acknowledge to you the great honor you have done me in electing me president of your society.

A New Water Filter for Troops.—Recent advices from Vienna speak of a water filter, the invention of a staff officer of the Austro-Hungarian army, which after thorough trial by the Sanitary Committee of the War Office has been adopted and issued to the army (*Journ. Am. Med. Ass'n*). Of these filters 12,000 are now in use by the troops at the corps maneuvers in Galicia, and are reported as being perfectly satisfactory. The filter is made in two sizes; one the dimensions of the cavalry water bucket, the other smaller. It contains two wire sieves; one resting upon the bottom of the bucket and the other suspended midway between the top and bottom. A handful of asbestos is placed upon the lower sieve, and the bucket is hung over a cask or any suitable receiving vessel. The water is said to pass through the filter perfectly clear, odorless and suitable for drinking, the pulpy asbestos absorbing the organic matter. The upper sieve is intended to remove the coarser particles from the water, such as gravel, weeds, insects, etc; the lower sieve to hold the asbestos. The latter can be washed and cleaned by hand and used a number of times. The smaller filters are constructed on the same principles. Each consists of a round piece of canvas of the size of a dinner plate, provided with a string around the edge to draw it to an orific and to hold a cup-shaped tin funnel. The funnel contains two sieves and when it is to be used a small piece of asbestos of the size and double the thickness of a silver half-dollar, is placed upon the lower sieve.

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The Grippe in St. Louis.

The grippe has again made its entrance in this section of the country. The epidemic seems to have begun in St. Louis two months ago by a few isolated cases and since then has increased in number and severity. According to our own experience the nervous form of the disease seems to be more frequent in the present epidemic than it was in former years, the muscular pain and pain in the joints being in some cases very severe. In others gastro intestinal catarrh is observed and some, in which there are daily chills followed by fever and perspiration with headache and backache, give the impression of intermittent malarial fever, and if it were not for the accompanying cough and the fact that there is an epidemic of grippe, could be easily mistaken for malaria. Broncho-pneumonias have not infrequently developed in consequence of the bronchial catarrh in the present epidemic old and debilitated persons being particularly predisposed to this complication. It is needless to mention again the many different forms in which the disease manifests itself, but one case which we observed lately seems of particular interest on account of the apparently peculiar localization of the infectious material. A girl twelve years of age, had an attack of grippe two years ago in which the nervous form of the disease predominated. There was severe headache, muscular pain, swollen and painful knee- and ankle-joints, delirium, high fever; recovery. Patient remained well until a week ago, when she complained of pain in left thigh and a lump behind the lower maxilla about an inch above its angle. The lump was evidently an enlarged gland of the size of a pigeon's egg, which was movable and not tender upon pressure. Temperature 100° F. Patient claimed to be entirely well otherwise. There was no apparent affection of throat and nose, no cough, a good appetite, good sleep and healthy appearance. Patient was kept in the house; no therapeutic interference. The pain, which was quite bearable, subsided in three days entirely and the enlarged gland disappeared within a week.

Her grandfather, in the same house, was suffering from an attack of grippe in which the respiratory organs were principally affected, while her older sister had just recovered from an attack which was followed by swelling of several joints. Her brother was coughing and had what appeared to be bronchitis without any positive symptoms of grippe.

The frequency with which the disease attacks several members of the same family in succession must forcibly remind us that it is communicable from person to person and the majority of authors now seem to be of this opinion. Bacilli characteristic of the disease are always present in the bronchial mucus and have occasionally been found in the blood.

It has become a habit in this country in medical journals as well as the lay-press to use the French instead of the English article with the word grippe. Why this is the case we have never been able to understand, since the word is not of French origin. While there can be no serious objection to using the French instead of the English word we must emphatically protest against calling the disease "the la grippe" thus using both the French and English article as we have had occasion to observe quite frequently in the lay-press.

Recent Progress in Otology.

Clarence J. Blake, M.D., (*Bost. Med. and Surg. Jour.*), writes upon this subject as follows: The most striking advances in otology during the past year have been in the direction of aural surgery, and have been of two classes: those having for their purpose the radical treatment of suppurative disease of the middle ear and its complications and consequences, and those seeking to find a means for the better and more immediately satisfactory relief from impairment of hearing, annoying subjective noises, and so-called auditory vertigo.

The first class of cases, and the means to be employed for their treatment, appeal especially to the interest of the larger number of practitioners, because they include a surgical necessity which may at any time, under unfavorable conditions, become a surgical emergency, and because, in a large proportion of cases a long-continued suppurative inflammation of the middle ear, the ordinary treatment by means of syringing, dry cleansing and

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the application of astringents and antiseptic powders is inadequate to relief. Gradually the advance has been made from the treatment above mentioned to the use of intra-tympanic syringes and insufflators, to the use of currettes in the middle ear in a limited fashion, to the removal of the ossicles themselves when carious, and to the more thorough removal of carious portions of the tympanic walls, and finally to the resort to the still more radical operation of reflecting the auricle forward and by chiselling away the posterior superior portion of the bony canal gaining access to the tympanic attic and the antrum.

This operation, first proposed at the Berlin Congress in 1890, by Stacke, and bearing his name, is both historically and clinically reviewed by Weismann ("Traitment des suppurations de L'Atique," Paris, 1893) in a recently published thesis. Following Toynbee the first carefully considered clinical report of suppuration of the attic of the tympanum, as it is now called, was published in the recent report of two cases by J. Orne Green ("Perforation of the Membrane of Shrapnell," Boston *Med. and Sury. Jour.*, March 26, 1874), who was followed by other observers. Bezold, in his paper on the treatment of cases of this class by means of boracic acid pewder insufflation ("Zur Antiseptischen Behandlung der Mittelohreiterungen," *Archiv. f. Ohrenheilk.*, 15, 1, May, 1893), enumerates the three categories which most resist treatment as, (1) suppuration of the tympanum with osseous necrosis; (2) suppuration of the tympanum accompanying pulmonary phthisis, and (3) suppuration of the upper portion (the attic) of the tympanum. For the latter he recommends frequent lavage by means of the intra-tympanic canula or syringe, the only procedure commonly in use until Schwarz and Kessel defined the indications for, and described the method of removing the malleus and incus when themselves carious or when they obstructed drainage from the attic in cases of suppuration in that portion of the tympanum or impeded access to its diseased walls. The operation of Stacke consists in reflection of the auricle forward to such an extent as to permit access to the superior posterior portion of the osseous canal, this being removed by chiselling and the diseased cavity of the attic and antrum cleared and curetted, during which process the stapes is protected by an S shaped hook introduced into the cavity from the front; a quadrangular flap is then formed, the soft tissues of canal tamponed into the opening made, and the auricle replaced.

Weismann offers the following conclusions to his thesis:

That suppurations of the attic are especially worthy of consideration (1) because ef their insidious progress, (2) because of the important organs in their neighborhood, (3) because of the difficulty of reaching their point of origin; which reasons explain not only their gravity but their obstinacy.

The double advantage of the operation of Stacke is that it affords means of reaching the suppuration of the attic and at the same time affords an opportunity of determining the existence of any disease of the antrum; in other words, it may be regarded both as an exploratory and curative operation.

Panse ("Stacke's Operations methode zur Freilegung des Mittelohrraumes," *Archiv. f. Ohrenheilk.*, May, 1893), in reviewing the same subject, reports 57 cases of Stacke's operation, which he has modified in a measure by not withdrawing the membranous portion of the external auditory canal, but, by carrying it forward, and by limiting the outer incision to the superior and posterior post auricular region instead of carrying it further forward; the objection to these two procedures being, according to Panse, on the one hand liability to a necrosis of the outer limit of the osseous canal, and, on the other, a necrosis of the musculus attollens auriculæ. Of the 57 operations reported by Panse, cholesteatomatous masses were found in 13, and caries in 26; 34 of the cases were healed; 4 died; 8 cases were not cured, and of these one underwent secondary operation, and one other was discharged with facial paralysis.

MacCuen Smith ("The Class of Cases in Which We May Expect Good Results from Excision of the Membrana Tympani and Ossicles," *Ther. Gaz.*, July 15, 1893) reports 154 cases of middle ear operations, chiefly of removal of the membrana tympani and ossicles. Of these operations 69 were in cases of non-suppurative disease of the middle ear, and were undertaken on account of marked impairment of hearing, distressing tinnitus, or vertigo. The results in these cases, as well as in those of suppurative disease, for relief of continued discharge, are stated to be excellent, although but six cases are reported in full.

Burnett ("The Surgical Treatment of Chronic Tympanic Vertigo Often Miscalled Meniere's Disease," *Med. News*, Sepsember 30, 1893), who has previously reported cases of removal of the membrana tympani, malleus and incus in cases of non suppurative disease of the middle ear, recently gives the results of operative interference in cases of auditory vertigo. "Tympanic vertigo," says the writer. "due to lesions of the middle ear, is a frequent occurrence. It is often not recognized, especially by the general practitioner, as aural vertigo. It is not unusual for tympanic vertigo to be attributed to intestinal disturbance, or to 'neurasthenia' instead of to an aural lesion. True tympanic vertigo, due to a lesion in the middle ear, chiefly from chronic catarrh of the tympanic cavity, is paroxysmal in character, and attended with tinnitus and deafness in the affected ear. It is caused by the inward pressure exerted in the labyrinthine fluid by the retracted and anchylosed ossicles. The foot plate is thus unduly pressed into the oval window, and there held by the force made, paroxysmally, and for a longer or shorter period."

The author's theory that morbid pressure by means of the impacted stapes upon the fluid in the labyrinth is a local cause of vertiginous symptoms was tested in an operation upon a case of chronic catarrh of the middle ear, with constant tinnitus and frequently recurring attacks of severe vertigo which had been superadded to

deafness in the left ear within the previous two years. The malleus was found to be adherent to the promontory, and both this bone and the membrana tympani were removed in order to liberate the impacted stapes, with favorable results. The success of this and four subsequent operations of a like character, led Burnett to conclude that removal of the incus alone, or of the incus and stapes, the membrana tympani and malleus remaining in position, would liberate the stapes and the compressed labrynthine fluid, as well as, or perhaps better than, total excision of the membrana and malleus, with less liability to inflammatory action.

As the result of ten operations, including among them resection of the long process of the incus, the following conclusions are drawn:

1. That removal of the retractive force of the sound conductors upon the stapes is the efficient means of relieving the tinnitus, deafness and vertigo due to the lesions of chronic catarrh of the middle ear.

2. That the removal of the retractive force upon the stapes can be accomplished efficiently and simply by removal of the incus alone, and even by resection of its long process.

3. That the improvement in these cases is due to the liberation of the stapes from the retractive power of the tensor tympani muscle and the consequent unimpeded action of the stapedius muscle, which, relieved from the antagonism of the tensor tympani, tends all the more to draw the stapes from the oval window, thus aiding in its isolation and improved mobility as well as removing the undue pressure inward upon the labyrinthine fluid.

4. It would seem wiser, therefore, in most cases of chronic catarrhal deafness, tinnitus and vertigo, not to sever the stapedius tendon and remove the stapes, but to be content with the removal of the incus only.

5. The progressive improvement in hearing noted in many instances must be due to the passive motion exerted upon the anchylosed stapes by sound waves, which are enabled to reach this bone more freely after the removal of the incus.

In reference to the operative removal of the membrana tympani together with the malleus and incus, Jacobson ("Lehrbuch der Ohrenheilkunde, Leipzig, 1893.") describes the operation as follows: The membrana tympani, either the whole or a part, in case of perforation from suppurative disease, is incised close to its periphery, especial effort being made on the posterior portion to include the annulus tendinosus. The incision is best begun in the inferior segment, in order that the field may be kept clear from hemorrhage, which is stilled with an application of absorbent cotton either upon a probe or in the form of a tampon. When this has been effected, the tendon of the musculus tensor tympani is divided by means of an angular knife passed behind the long process of the malleus posteriorily and carried upward with the cutting edge in contact with the tendon; after division of the tendon, the knife is turned in the same plane backward until it comes in contact with the descending process of the incus, down which it is carried until the incudo-stapedial articulation is reached, when this is also divided, a precaution specially necessary, according to the author, in cases of anchylosis of this joint. The malleus, together with the membrana tympani, may now be extracted either by a small instrument resembling a lithotrite, or by means of a wire snare, care being taken in using the latter instrument to carry the wire loop well above the short process. When the membrana tympani is very much depressed, it has been found of advantage to thoroughly inflate the middle ear before the operation. If the operation is undertaken for the purpose of improving the hearing, the removal of the incus is, according to Jacobson, only necessary when that bone has become pathologically immobilized, but in the case of an operation undertaken for the relief of suppurative disease of the middle ear and necessitating the removal of the whole or a part of the membrana tympani together with the malleus, he advises that the incus also should be removed.

Gomperz, ("Ueber die Entwicklung und. den gegenwaertigen Stand der Frage von der Excision des Trommelfelles und der Gehoerknoechelchen, *Archiv. f. Ohrenheilkunde*, September, 1893.") in concluding his valuable paper on the development and condition of the question of excision of the membrana tympani and ossicula, gives a resume of his personal experience in 46 cases, of whom 28 were men and 18 women. Two of the cases were between five and ten years of age, 9 between ten and twenty, 19 between twenty and thirty, 10 between thirty and forty, 5 between forty and fifty, 1 between fifty and sixty. These were all cases of suppurative disease of the middle ear treated upon a conservative basis for the purpose of determining the results obtainable without special operative interference. In 49 cases of suppurative discharge from the tympanic attic the pus made its exit in 17 cases through the membrane of Shrapnell. In 36 of the 49 cases, that is to say in about 73 per cent, the treatment by means of middle ear syringing, insufflations and the like, resulted successfully. Ten of the cases remained under treatment but a short time (not more than a week), and then disappeared from observation, but in four of these the discharge materially decreased in that time. Three of the cases remained unimproved for so long a time that the extraction of the malleus and incus was decided upon. Setting aside 23 cases, which were considered inadequate to the question of the results of conservative treatment because of their uncertain value statistically, it was found of the remaining 26 that 23 remained healed for over a year, one was improved and two unimproved. Of the 23 cases cured, six subsequently relapsed,—one, eight months later; two, one and one-half years; one twenty-one months; one, four years; one, five and one-half years. Without exception, these relapses occurred in consequence of the collection of cholesteatomatous masses, after the removal of which by syringing, the ear again speedily healed. In

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only one of these cases was it found necessary to remove the malleus and incus, which was done with favorable results. Considering, therefore, that out of 26 cases 17 were definitely cured, the percentages would stand as follows: cured 65 per cent; cured with subsequent relapse, 23 per cent; improved 3.8 per cent; unimproved, 7.6 per cent.

In view of his experience under the fact that after the removal of malleus and incus, the tympanic attic is likely to become the seat of epidermal accumulation, and that these are frequent causes of relapse, the author is of the opinion that the conservative method of treatment of the suppurative disease of the middle ear is not only not secondary in its value to the operative treatment, but is in advance of it.

International Medical Congress—We have been informed by Dr. A. Jacobi, chairman of the American National Committee of the International Medical Congress, which was postponed from September 24th on account of Cholera prevailing in Italy, that he has been notified by the Secretary General that the Congress will be held at Rome from March 29 to April 5, 1894. Instructions and documents relating to the journey, etc., are promised for the near future.

The Samuel D. Gross Prize.—The Quinquennial Prize of One Thousand Dollars under the will of the late Samuel D. Gross, M.D., will be awarded January 1, 1895.

The conditions annexed by the testator are that the prize "Shall be awarded every 5 years to the writer of the best original essay, not exceeding one hundred and 50 printed pages, octavo, in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens."

It is expressly stipulated that the successful competitor, who receives the prize, shall publish his essay in book form, and he shall deposit one copy of the work in the Samul D. Gross Library of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut St., Philadelphia, before January 1, 1895.

Each essay must be distinguished by a motto, and acompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The Committee will return the unsuccessfull essays if reclaimed by their respective writers, or agents, within one year.

The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

ABSTRACTS

MEDICINE.

Some Causes and Characteristics of Neurasthenia.—A. D. Rockwell, M.D. in the *New York Med. Journ.* says:

While very little has been added during the past few years to our knowledge of the etiology, pathology, or treatment of neurasthenia, yet it will, I think, be admitted by all whose experience entitles their opinion to weight that the disease is in most instances entirely curable, and in some cases self-curable. The enunciation and widespread diffusion of this idea I consider most important, for in neurasthenia we are dealing with a condition of mind and body that occasions more misery and paralysis of utility than many an organic and incurable disease, and because added to those wearisome and subjective symptoms of distress which only the neurasthenic himself appreciates and the physician who listens to his tale of woe, is a condition of utter hopelessness, and a resistive tendency that sometimes very materially interferes with the success of therapeutic measures. The true neurasthenic has a double burden to bear, in that, being sick and in despair, friends, relatives, and associates, in their ignorance, take little care to conceal their opinion that all these symptom are mere figments of the imagination.

Fully aware of this incredulity and of the inability of friends to appreciate his condition, many a neurasthenic aggravates his condition by concealment and brooding, and the end is sometimes suicide. It is admittedly true that, in general, pathology and the etiology of disease are far in advance of therapeutics, but in neurasthenia we have a notable example of the reverse of this.

Our knowledge of its pathology is still conjectural and unsatisfactory, and in the study of its genesis and gradual development the most painstaking observation and analysis are still required. It is a source of satisfaction, at all events, that whatever tentative knowledge we possess in this direction does but confirm the correctness of the generally accepted methods of treatment.

In a note on Nervous Diseases in Low Races and Stages of Culture (*Science*, Dec 16, 1892) Dr. D. G. Brinton holds that those are in error who claim that "diseases of the nervous system have greatly incressed with the development of civilization." My own very positive conviction, based upon a somewhat extended experience in the treatment of neurasthenic cases, is quite the reverse of this. In hospitals, in dispensaries and among the very poor everywhere a typical case of neurasthenia is difficult to find, but among the well to-do and the intellectual, and especially among those in the

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professions and in the higher walks of business life, who are in deadly earnest in the race for place and power, this peculiar impoverishment of nerve force that we call neurasthenia appears with alarming frequency. Dr. Brinton says also that civilization, so far from increasing this class of maladies, is one of the most efficient agents in reducing them in number and severity, especially when freed from religious excitement and "competitive anxieties." It is, however, these very "competitive anxieties" so intensified in this country, this worry of business and professional life, that civilization fosters and deepens. American nervousness is indeed a distinctive phrase, and the frequency with which allusion is made to it gives it, in the minds of many, a meaning apart from that ordinarily ascribed to the term. We hear very little of English, French, or German nervousness, and yet, in a large record of cases, the writer has thus far failed to detect any widely divergent lines of differentiation between the functional nervous manifestations of the different nationalities. But while the general characteristics of the nervous temperament are very much the same, whether observed in the English or German, French or American, and while the same general causes underlie each class of cases, it can not be denied that in America there are climatic conditions and business and social environments to the influence of which the nervous system is peculiarly susceptible, especially if complicated with evil habits, excesses, tobacco, alcohol, worry or special excitements.

In the older countries men plod along in the footsteps of their fathers, generation after generation, with little possibility and therefore little thought of entering a higher social grade. Here, on the contrary, no one is content to rest with the possibility ever before him of stepping higher, and the race of life is all haste and unrest. It is thus readily seen that the primary cause of the increase of neurasthenia in this country is civilization itself, with all that the term implies, with its railway, telegraph, telephone, and periodical press intensifying in ten thousand ways cerebral activity and worry. Another important causative factor is found in the relative dryness of our atmosphere as well as in our extremes of heat and cold. Evidences of the dryness of this climate are observed in the drier and stiffer hair grown by Americans and in their leanness compared to the English and German. In the Northwest this peculiarity of climate is more positive even than in the East, as evidenced by the readiness with which meats when hung in the air are dried and preserved. It may be only a coincidence, but the writer has remarked the greater proportional number of neurasthenics coming from that portion of the country.

Then, again, no one can estimate the importance of the natural electricity of the body nor altogether analyze the part it plays in the human economy. What is an excess and what a deficiency has never been demonstrated, but we do know that dry air prevents the natural electricty of the body from being conducted away, and it is rational to belived that constant excess of electricty in the body may in some cases so overstimulate as to excite a degree of nervousness that amounts to disease.

Fortunately, however, man has it in his power to rise superior to climate; can adapt his methods of living to the vicissitudes of climate.

The cause and cure of disease in general are very much in what we eat and drink and the way we live. If the American would cese squandering his vital forces by excesses, exercise a little common sense in what he eats and drinks, and practice the gospel of rest advocated by Herbert Spencer, he might bid defiance in great measure to climate and regain the old-fashioned constitution of his fathers.

All physiology and all pathology begin and end in the cell, and it is quite as important to recognize the facts of cellular nutrition in dealing with the functional diseases of the nervous system as where its nutrition is perverted and poisioned by microbic agencies. The vitality of the cell is the important and underlying factor in health and disease, and experimental physiology, in realation to changes in nerve cells under stimulation, is already throwing some light upon the etiology and pathology of neurasthenia.

Electrical excitation of a nerve in association with a spinal ganglion is followed in a few hours not only by some diminution in the size of nerve cells, but by a very considerable shrinking of the nuclei of the cell capsule, and this change in the cell is found to be generally in proportion to the severity and duration of their stimulation.

It is a specially significant fact also that the cell recovers its normal activity and appearance only after long hours of rest, five hours of stimulation producing an exhaustion and change that requires twenty-four hours of rest to restore.

Associated with these actual changes in the nerve cells are chemical reactions that add a toxic element to the actual muscular and nervous expenditure of energy. What takes place in nerve cells under artificial stimulation takes place also, in all probability, in greater or less degree in the ordinary activities of daily life, and the fatigue of mind and body which follows concentrated or prolonged effort is in the same way dissipated by rest and sleep. This is what is to be normally fatigued.

Muscular activity through attendant chemical changes always yields certain noxious products that are both obstructive and destructive, and it is not alone rest and sleep that restore the normal organic tone of mind and body, but also the flow of blood which, while it deposits new material, carries away the waste products which clog and poison the system. A person may be said to be normally fatigued just so long as complete recuperation follows rest and sleep. Even where, through electrical stimulation or by effort of will, the repeated muscular contractions result in such absolute exhaustion that the muscle refuses to respond, or only imperfectly, to artificial stimuli or voluntary effort, it is still only

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normal fatigue if through disuse the muscular fibers regain in a few hours or days their usual tone. In involuntary muscular contractions there is no mental effort, and therefore no fatigue of the central nervous system, but in voluntary muscular effort there is a certain expenditure of energy that fatigues brain as well as muscle. On the other hand, severe mental labor results in a weakening of the inactive muscles—a condition supposed to be due to toxic influences following chemical changes in the brain. It is believed, and this belief is in accordance with accepted physiological principles, that both brain and muscle when exercised undergo a regressive metabolism of tissue of an oxidative character. The poisonous material thus set free acts upon the muscles through the circulation and weakens them.

If this voluntry or involuntary stimulation of muscular activity is frequently repeated to the verge of exhaustion, and until the recuperative power fails to bring back the muscular tone to its normal level, we have passed the bounds of normal fatigue. The muscles, or the brain, if the strain has been along the line of mental effort, are now suffering from pathological fatigue, a condition in which the nutrition of the nerve cells is primarily at fault—an unbalanced condition of waste and repair; in other words, neurasthenia, The inanition and auto-intoxication of neurasthenia or pathological fatigue are direct results of those visible changes in nerve cells and the toxic products of excrcise which accompany normal fatigue. Overstrain, from whatever cause and the derangements of nutrition, initiated and determined by repeated toxic influnces, must be accepted as the essential causes and pathological state of the neurasthenic condition.

Generalized Tuberculosis Especially Affecting the Serous Membranes.—Sergent (*Bull. de la Soc. Anat. de Paris*) has reported the case of a girl, eleven years old, whose father had died at the age of thirty-three years with bilateral pneumonia, and whose maternal grandfather had been tuberculous. When eighteen months old the child had had convulsions for a week. From the age of seven to nine she had had slight epixtasis almost every morning. At the age of eight she had had whooping-cough lasting for three months, and at nine years she had had measles. For two months it had been observed that the child was rather depressed and always tired, complaining a good deal of pain in the thighs. Appetite was lost, and almost everything that was swallowed was rejected. There was almost constant headache. Emaciation and debility were quite pronounced. There was pain in the abdomen, but no tumor could be detected upon palpation, though there was evidence of the presence of fluid in the peritoneal cavity. The liver extended a finger's breadth below the margin of the ribs, but was not painful upon manipulaeion. The area of splenic percussion dullness was not increased. There was little cough, without expectoration; there had never been hemoptysis. There was no dyspnea and no thoracic pain. The pulmonary percussion resonance was slightly impaired at the summit of the chest; the breathing was roughened and some fine rales were to be heard. The heart sounds were feeble and distant. There was no palpitation and no precordial anxiety. The pulse was rapid and small, and intermitted occasionally. The urine presented no abnormality. The bowels were constipated. The temperature, a little elevated, rose higher and became irregular and oscillating. Dyspnea and pain in the chest later set in. An area of dullness became apparent in the outer part of the right infra-spinous region, and here the breathing was bronchial, and crepitant rales were to be heard. Later, pleural friction sounds were to be heard upon the right, and crepitant rales in other parts of the right lung and also in the left lung. The abdomen became progressively more and more distended and painful, while the dullness in the dependent portions became more pronounced. Finally, the patient was seized with convulsions, loss of consciousness, and anesthesia. The attack lasted about two minutes, and was followed by copious perspiration. An hour later a second attack occurred, and in the course of the day four others. Death took place at night during the ninth paroxysm.

At the necropsy two quarts of sero-purulent, flocculent fluid were found in the abdominal cavity, the walls of which, and loops of intestine as well, were in places lined by false membrane. The liver was large, fatty, and friable. The spleen was of usual size, deep-red in color and rather deficient in consistency. Upon its surface were numerous disseminated yellowish granules The kidneys presented little change beyond congestion. The jejunum and ileum contained several small superficial ulcers, marked at the periphery by little granulations visible upon the peritoneal surface. At the junction of ileum and cecum there was a confluent mass of granulations also visible upon the peritoneal surface. The visceral peritoneum presented many granulations and the mesenteric glands were enlarged. The right pleural cavity contained a small quantity of sero-purulent fluid. The right lung was extensively adherent to the parietal pleura, especially posteriorly and at the lower part of the upper lobe. At this point there was a thick layer of pseudo membranes, in the midst of which was a large number of granulations. The lung beneath this, in an area perhaps equal to that of a small orange, exhibited a condition of caseous pneumonia. Adjacent to this, both superficially and profoundly, were numerous granulations, diminishing in number as this focus was receded from. Elsewhere upon the surface of the lung were scattered granulations, most marked, however, at the interlobular fissures. The left lung presented a small number of scattered granulations. The tracheal and bronchial glands were enlarged and caseous. At the hilus the right mediastinal pleura and the pericardium were adherent. The pericardium was distended to the size of a fetal head, and was in part covered by the left lung. An incision evacuated nearly two pints of hemorrhagic fluid. The membrane was

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lined by fibrinous exudation, beneath which many tuberculous granulations were visible. The heart was dilated, the myocardium flabby; valves and orifices were normal. The convexity of the brain was congested and presented slight exudation in the course of the pial vessels. In the anterior perforated spaces, and accompanying the Sylvian arteries, a number of granulations were visible. Tubercle bacilli were found in the pulmonary and pericardial lesions.—*Amer. Jour. of the Med. Scienc.*

Effects of Alcoholic Abuse Upon Posterity.—Dr. A. E. Schmid (*Med. News*) says:

A man became a drunkard after middle life; children born to him before his degradation remained free from the vice of drunkenness, while those born afterward became drunkards.

Erasmus Darwin states that diseases inherited from drunkards descend to the third and fourth generations, until, finally the family dies out.

Another observer says that of ninety-seven children of drunkards only fourteen remained free from some defect.

Still another maintains that 50 per cent of the idiots and imbeciles of cities are the children of drunkards.

The children of drinkers inherit the same or a greater pre-disposition to nervous disorders than those of nervous of really insane parents. They suffer most frequently in infancy from convulsions and epileptiform diseases.

Districts known as "drinkers' districts" in Europe furnish far fewer good recruits for military service.

A law was passed in Sweden against drunkenness, i.e., making it a punishable offensive, and since then the number of persons unfit for military service on account of undersize and general weakness, has grown much less.

A distinguished specialist in children's diseases observed ten families of drinkers and of temperate parents for a period of twelve years. He records his observation as follows:

The ten drinking families produced in those twelve years fifty-seven children. Of these, twenty-five died in the first week of life, of weakness, of convulsive attacks, or of edema of brain and membranes. Six of the children were idiots; five were stunted in size, and were of real dwarfish growth; five, when older, became epileptics; one, a boy, had grave chorea, ending in idiocy; five had inherited diseases and deformities, such as chronic hydrocephalus, harelip and club foot, two of the epileptics mentioned became, by inheritance, drinkers. Only ten, therefore, of all these fifty-seven, or 17.5 per cent, showed during youth normal disposition and development of body and mind.

The ten temperate families produced in twelve years sixty-one children. Of these, five died in the first weeks, of weakness; four in the later years of childhood, had curable nervous affection; two only showed inherited nervous defects. The remaining fifty, or fully 8.19 per cent, were normal in every way developing well in body and mind.

My friend, Dr. Vandenburg, has kindly furnished me with a list of forty-four patients treated by him for alcoholism. On examining the notes carefully I find that twenty-five of them had ancestors, or at any rate relatives, who drank. Of ten of them there was no previous history obtainable; these, very likely, ought to be added to twenty five, as it appeared from certain signs that they merely did not wish to expose their family histories.

It is a curious but very general fact that there exists a sort of instinctive tendency in the members of a family to hide from others as well as from themselves anything that would tell of the defect by a faulty nervous inheritance—I mean an inheritance of defects in the central nervous system. Men do not like to acknowledge the controlling influence of such a fate, and they often instinctively take pains to refer diseases that are unmistakably inherited to very ordinary, accidental, and always different causes. To try to obtain information in such matters from family members is too frequently a fruitless undertaking. They will often throw impediments in one's way' even leading one into wrong paths; and to make a proper diagnosis and prognosis in nervous diseases one must try to learn not the history of his patient, but also the diseases that are prominent in his family.

But to return to my Vandenburg statistics; Four mothers and sisters were tuberculous; one has a father who is very nervous and smokes incessantly; one has an asthmatic grandfather. Only three have a family record that seems free from all defects. Eleven of them have shown tuberculosis or some other lung difficulty in their families; one had insanity on the mother's side, and of one the father's sister was insane; and one had insanity in two aunts on the father's side. There was insanity in the father of one, idnced by drink, and in one instance the paternal grandfather drank heavly, the father moderately. In one case the paternal grandfather drank hard and died of apoplexy, the great grandmother was tuberculous, and the mother paralytic. In four instances the grand father drank heavily, though the fathers were free from the vice.

SURGERY.

The Prevention of Shortening and Other Forms of Mal-Union After Operation.—Keetley (*Lancet; Boston Med. and Surg. Journ.*) has contributed an interesting paper upon this subject. He uses steel pins to secure the ends of the fragments of a divided bone, and the details of the method he has used are as follows.

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The instruments required are: (1), two L-shaped

pins of hardened steel thickly plated with silver; (2) the patella instruments described by me in the *Lancet* for December 10, 1892, or at least the long-bladed brad-awl; (3) a pointed tenotomy knife; and (4) a flat sand-pillow. Each L-shaped pin consists of course of two arms, one cylindrical, the other flattened in a plane at right angle to the rounded arm. The cylindrical arm is seven millimeters in circumference, and has a rounded blunt point. The length is three and a half inches, that is, nearly nine centimeters. The flattened arm of one pin is three inches long, that of other being five inches. Both are one-fourth of an inch wide, about one tenth of an inch thick, and there are notches at the edges at intervals of one-fourth of an inch. The patella brad-awl has, it may be mentioned, a blade three and one-half inches long, and both its blade and its handle are of one smooth piece of nickeled steel, the handle being made hollow for lightness.

Operation.—Stringent antiseptic precautions must be used, and they are particularly easy in an operation like this, where the open wound is a puncture and nothing enters it except two or three straight and smooth pieces of plated steel. This easiness is no excuse for carelessness—it only makes neglect inexcusable. The following are the details of the operation:

1. Reduce the fracture under ether, breaking it down again if union has taken place recently in a bad position.

2. While two assistants make extension and counter-extension, adjust the fractured ends and try to ascertain the precise seat and place of fracture. Select a point in each fragment likely to be clear of the fracture, and in such a position that a straight line from it transversely perforating the bone would keep well clear of important vessels and nerves, synovial membranes, etc. In both my two cases I have been surprised to find how far it was necessary to go from the fracture in order to find a firm place in the lower fragment. The two points selected should lie as nearly as possible above one another, and not in a spiral line circling the limb.

3. Puncture the skin, push the brad-awl through the puncture down to the bone, use it very gently as a probe to define the position of the bone, and then bore steadily through. Take care not to break the long blade and not to perforate obliquely.

4. Slip the director along the awl. If the handle of the latter is in the way bend the former a little and have the skin pressed down on the bone.

5. Withdraw the awl, twisting and not jerking it out; keep the director carefully in position.

6. Pass in one of the pins through the bone and withdraw the director. Repeat 3, 4, 5 and 6 in the case of the upper fragment. Take care to bore both fragments in the same longitudinal plane.

7. The two pins being now in the bone, turn them into such a position that the flat arm of one lies upon, and touches the flat arm of the other. If the arms are to remain less than five inches apart the long armed pin must lie over the other. The advantage of making the flat arms of different lengths will now be seen. The pins can be thereby fixed at any distance from two to six inches apart.

8. Full extension being made, and the limit demonstrated by measurement to be of proper length, lash the flat arms of the pins together with silver wire pulled taut and twisted home at the ends. See that there is full tension on the pins before fixing them, for they have a slight elasticity. If this point is not attended to a quarter of an inch or more may be lost.

Dressings.—Iodoform gauze wrung out in sublimate solution (1 to 2000) should be placed beneath and above the external arms of the pins; the gauze should be flat and not lumpy. Over the gauze a well-rolled wood-wool pad should be placed, and all round the limb at and near the fracture there should be a sheet of absorbent wool. The whole should be bandaged firmly and evenly, firmly enough to prevent any internal extravasation. Lastly, external appliances suitable to the case should be put on. If, as in my first case, the superior fragments tend to ride forward, I use double splint with transverse iron lips or brackets, and in all cases I should use extension.

He has used them in two cases. In one a boy of thirteen, the use of the pins prevented the slightest shortening. In the other case there was some rusting of the pins, which occasioned superficial suppuration. They were removed on the forty-third day following the operation, and the fifty-third day after the fracture. Firm union resulted without the slightest shortening.

A Contribution to the Study of Club-Hand.—The following is an abstract of Dr. Reginald S. Sayre's paper which was read at the Pan-American Medical Congress (*Jour. Am. Med. Ass'n*): Congenital club-hand is a rare deformity. Club hand resulting from an injury to the central nervous system, or to an unsuspected fracture of the bones at the time of birth, is not strictly speaking a congenital affection. In congenital cases there are three varieties: 1, the skeleton is complete and well-formed; 2, the skeleton is complete, but ill formed; 3, the skeleton is incomplete and distorted.

The general belief is that most of the cases belong to the third variety. The writer has seen in all five cases, only two of which belonged to this division. In four of the five cases club-foot in one form or another was also present.

In milder cases, manipulation and retention in the improved position with plaster-of-Paris is of great benefit. In severer cases, section of tendons, ligaments and fascia may be necessary. Open section is often preferable, and when the flexors are involved it is better to operate in the arm, cutting the tendons diagonally, slipping the ends by each other until the required length is gained and then suturing. Two of the author's cases were due to great contraction of the flexors of the fingers, but neither of them came to operation. In a double case, which is still under treatment, manipulation and plaster-of Paris is doing good work. In another

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case, also under treatment, the child has right club hand, right club-foot and left lateral curvature. The whole right side of the body is less developed than the left, possibly due to disuse, the right hand and foot being so deformed at to prevent even moderate use. The club-foot was recently cured by an operation. In the club-hand, the radius and thumb are absent, together with the first metacarpal bone and several of the carpal bones, exactly which ones it is difficult to make out. The hand was perpendicular to the arm on the radial and flexor side, the ulnar being curved thirty degrees to the radial side. The carpus did not articulate with the ulnar, but was drawn up above its distal end, and was attached to it by means of firm ligamentous bands.

The writer first performed an osteotomy of the ulnar and corrected the curve. After an ineffectual attempt, by several weeks of traction, to lengthen out the ligaments so that the carpus could be brought down to the end of the ulnar, he cut down upon the ulnar and separated all the ligamentous attachments from it, but even then could not draw down the carpus sufficiently, and he therefore removed two carpal bones which he thought were the os magnum and the unciform. The tip of the styloid process was then cut off, and the end of the ulnar was inserted into the gap left by the removal of the carpal bones. The hand was dressed in the straight position, and after three weeks, passive movements of the wrist were begun with the object of creating a serviceable joint if possible. The operation benefitted both the position and the usefulness of the hand, although an apparatus is still worn to give strength to the wrist and to preserve a better position of the ulnar, which tends to slip a little from its position unless thus supported,

The treatment of club hand must depend upon the conditions existing in each individual case. The writer's operation is the first one of the sort reported, so far as he is able to learn.

Doctors' Bills as Debts of Honor.—Strange as it may seem, doctors' bills are said to be classed as debts of honor in Austria, China and Sweden, (*Journ. of An. Med.. Ass'n*). They are therefore in those countries left, as gambling debts are here, so far as the law is concerned, to be paid or not, according to the inclination of those incurring them. So in England, unless the law has been very recently changed, a physician (or one licensed by the College of Physicians) has no remedy at law for has services, but his employment is wholly honorary, though a "medical practitioner," whose legal appellation is usually "apothecary," has. Indeed, it has there even been held the a physician, who prepared or dispensed his own medicines could not recover for them, although they were furnished to his own patients. This way not, however, be entirely a disadvantage, because it is well known that such obligations are frequently paid where legal debts could not be collected.

CORRESPONDENCE

Antipyrin a Prompt Styptic.

Editor MEDICAL REVIEW.—In the last issue of the MEDICAL REVIEW (November 18), under "Antipyrin a Prompt Styptic," I notice that Dr. F. C. Ford, of Nacodoches, Texas, has used antipyrine successfully as a styptic, after removal of vascular tumor of the mouth; and that to him is given the credit of discovering the hemostatic properties of this drug. The true discoverer of this valuable property is Professor G. Cesari, of Modenu, who published the results of his numerous experiments in *Rassegnu di Scienze Medichi*, during 1892, an abstract of which from the *Therapeutical Gazette* appeared in the *Abstract and Index*, September 15, 1892. For the benefit of those of the profession not conversant with the admirable styptic the entire article from the *Gazette* is quoted: "He says antipyrin applied to an injured bloodvessel or to living tissue, whether in the form of fine powder or watery solution, does not irritate or dry or produce any caustic effect on the tissues, or cause pain. It gives rise to local anemia more or less marked according to the length of time the agent is applied. A fifty to one hundred per cent watery solution produces no change in the caliber of the capillaries; but if made to bathe the veins of the mesentery of a frog or the jugular or femoral vein of a rabbit, more or less perceptible narrowing of these vessels can be observed. When a fifty per cent watery solution is applied to the frog mesentery the circulation in the capillaries is first slowed and afterwards arrested; if the experiment is prolonged the circulation in the larger bloodvessels is gradually stopped. While the smaller vessels of the mesentery and lung in the frog, and those of the ear and skin in the rabbit, become almost bloodless, after an application of a fifty to one hundred per cent solution, the larger vessels become dark red in color. Mixed with blood just drawn from the vein of a man or rabbit, antipyrin acts in different ways, according to the concentration of the solution. If that is less than twenty per cent, the blood, if placed in a test tube, acquires a persistent red color; and, if slight coagulation occurs, this disappears at once on merely shaking the fluid. If the same blood is mixed with thirty to one hundred per cent solution, the color is less dark, the blood remains liquid at the temperature of the laboratory, but if kept at a temperature of 38° C., it acquires a syrupy consistance and appearance, and the test-tube can be turned upside down without a drop of blood escaping, though there is no trace of coagulation. Antipyrin does not lower or in any way alter the blood pressure. To sum up, antipyrin more or less speedily arrests hemorrhages from both large and small bloodvessels when applied in solution of not less than forty, or better, fifty per cent. The effect of the application of solution of the latter

degree of concentration is almost equal to that of the finely powdered drug. Both the solution and powder should be applied on plugs of cotton-wool. Antipyrin, in short, if placed in contact with blood at its normal temperature, thickens and condenses it, and, without causing coagulation prevents it from escaping from the vessels. It stops secondary hemorrhages, and is, altogether, according to Cesari, a most valuable hemostatic."

For more than a year I have depended entirely on antipyrin as a local hemostatic, and have never in a single case, had cause to regret the choice. Effects are prompt and lasting. There is no clot to interfere with primary union, and it is in every respect the ideal styptic. I have used it in epistaxis, bleeding after extracting teeth, after operation for hemorrhoids, simple cuts, bleeding from lacerated urethra and many other cases. My method of application depends upon location of the hemorrhage—where possible I prefer the powder sprinkled over the bleeding surfaces and covered with borated cotton. Where this method cannot be persued, as in hemorrhage from urethra, epistaxis, etc., a fifty per cent solution is injected. In hemorrhage following excision of the tonsil, used as a spray or gargle, or the powder applied directly by means of a tube, I believe it would prove a most effectual hemostatic. I would also prescribe it in small doses, frequently repeated in hematemesis. I have prescribed it with good results in one case of hematuria in which the course of hemorrhage could not be definitely determined, but which was evidently renal in origin. It was given in twenty grain doses, three times daily, and the urine was clear of blood after the seventh dose. As the drug is excreted principally by the kidneys, I believe it will be found to be our best remedy in all forms of hematuria. Antipyrin is also a most reliable antigalactagogue. This fact was first discovered by Dr. Ryon-Tennyson, and his observations were verified later by M. H. Geibert (*Semaine Medicale*, 1890). Given in 30 grm. daily doses—grs. iv, every two hours, the lactive secretion will disappear in from two to six days. To obtain this effect it is not necessary to make any change in the woman's diet. In my own practice I have never found it necessary to continue the treatment longer than four days.

JEFF. S. DAVIS, M.D.

Montevallo, Alabama, November 22, 1893.

Toxicity of the Blood of the Common Toad.—MM. Phisalix and Bertand (*Archiv. de Physiol. Norm. et Patholog.*) have found in the blood of toads certain active principles having the same poisonous effect upon frogs and mammals as the venom secreted by the cutaneous and parotid glands of toads. When injected into frogs they produce paralysis, beginning in the hind limbs, slowing and arrest of the heart, and contraction of the pupil. They are produced by an internal secretion of the cutaneous glands, and to this internal secretion must be attributed the immunity of toads, as venomous reptiles, for their own poison.

BOOK REVIEWS

Medical Consultation Book, a Pharmacological and Clinical Book of Reference.

By G. P. HACHENBERG, M.D. 1893. [Austin, Texas: Eugene von Beckmann. St. Louis: J. H. Chambers & Co., 914 Locust Street.

This volume is evidently intended as a contribution to the "ever busy" practitioner who cannot find any time for reading his journals, and would not if he could. To him it may prove just what the compend it to the medical student who abhors the more difficult task imposed upon his analytical powers by the perusal of standard text books. The therapeutist that has managed to escape the taint of the *fin de siecle* skepticism, will find a veritable sesame in the 500 pages, closely covered with double columns of prescriptions designed to cure all ills and ailings that human flesh is heir to. Those who hanker after "nutshell" information will, no doubt, benefit by keeping this work within their fingers' reach.

E. C. R.

A Chapter on Cholera for Lay Readers.

By WALTER VOUGHT, PH B, M D. 1893. [Philadelphia: F. A. Davis Company. St. Louis: J. H. Chambers & Co., 914 Locust Street.

This neatly gotten up little volume marks a step in the right direction. From the serious complaints made against the New York State medical officers during the last year's scare, one could readily judge that many of our enlightened citizens had not fathomed the far-reaching importance of quarantine and other hygienic measures. A widespread understanding of epidemic diseases and their causes will prove an invaluable factor in establishing national and State prophylaxis. Dr. Vought succeeded in steering clear of all technicalities, and it is to be hoped that his voice, raised in such a good cause will reach the ears it was was directed to.

E. C. R.

Books and Pamphlets Received.

A Practical Treatise on Diseases of the Skin. Third Edition. By James Nevins Hyde, A.M., M.D. Lea Brothers & Co., Philadelphia, publishers.

Clinical Gynecology—Being a Hand-Book of Diseases Peculiar to Women. By Thomas More Madden, M.D., F.R.C.S.Ed., Obsstetric Physician and Gynecologist, Mater Misericordiæ Hospital, Dublin, etc. With 259 Illustrations. 80 cl. pp 561. Philadelphia: J. B. Lippincott & Co. 1893. Price, $4.00.

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MEDICAL SOCIETIES

Annual Meeting of the New York State Medical Association.—We are indebted for this report to the *Medical News:*

The President's Address was delivered on the first evening by Dr. S. B. Wylie McLeod, of New York County. This was followed by an address by Dr. John Shrady, in which he reviewed the work of the past ten years. He called attention to the fact that one of the most prominent features had been the holding of "prepared" discussions, following the practice instituted by the British Medical Association, and adopted by many of our most conservative medical societies.

In a paper antitled

THE PREVENTION OF DISEASE,

Dr. James G. Porteous, of Dutchess County, spoke particularly of the methods by which tuberculosis is disseminated, and read the printed directions that he gives his patients. They were cautioned against spitting on the floor or in the cars, and were directed to use a cup or wide mouthed bottle for a cuspidor, and to frequently wash this out with hot water. They were also advised to use individual table utensils and table-linen, and to sleep alone in airy apartments, and not to kiss others. Well persons were reminded that tuberculosis is principally communicated by swallowing the germs or receiving them into wounds, and they were warned not to kiss on the lips anyone who has a cough.

In a discussion that followed the reading of the paper by Dr. E. D. Ferguson on

NEPHROTOMY AND NEPHRECTOMY,

Dr. John Cronyn, of Erie County, cited a case in which for many years a lady had symptoms of stone only in the right kidney, yet the post-mortem examination showed that both kidneys contained large calculi. This illustrates some of the common difficulties in mak ing the diagnosis in this class of cases. Dr. Ferguson and Dr. Gouley both expressed the opinion that cystoscopic examination and catheterization of the ureters were more hazardous than an exploratory incision, and at the same time were less satisfactory.

Dr. N. P. Dandrige, of Cincinnati, in a paper on

THE SURGICAL TREATMENT OF PULMONARY CAVITIES,

said that this method could be employed with advantage in cases of abscess of the lungs, pulmonary gangrene, hydatid cyst, and of tuberculous and bronchiectatic cavities. The operation is often performed by mistake, under the supposition that the operator is dealing with a localized empyema. When there are adhesions between the pleura and the chest-wall, and the cavity is superficial, the operation is simple and involves but little risk. The position of the cavity is determined by means of an aspirating needle, which is used as a guide for the knife. After incision the cavity is packed with iodoform gauze.

The first afternoon was devoted to a prepared discussion on

LESIONS OF THE PLEURA,

which was opened by Dr. John Shrady, of New York County. Referring to pleurisy with serous effusion, he said that the indications for treatment were to limit the exudation in the early stage, to allay pain, to keep the bowels relaxed, to reduce the fever, and to adopt such measnres as were best calculated to promote absorption. When there is enough fluid in the chest to cause intermittent orthopnea, or when the fluid half fills the pleural cavity, or when after a month it shows no tendency to absorption, it is time to aspirate. The effusion may become purulent and yet give rise to no characteristic constitutional disturbance unless some of the pus is absorbed; hence one should be on one's guard. Dr. William McCollom, of Kings County, who continued the discussion, was inclined to attribute considerable importance to the streptococcus, the staphylococcus, and the pneumonia-coccus as etiologic factors, and he thought some of the discrepancies in the observations in this direction might be explained by the fact that these different observations were made at different stages of the disease. Dr. J. Blake White, of New York County, has noted an interesting clinical fact, namely, that the tendency to clear the throat when there is no local lesion is characteristic of pleurisy with adhesion, and that a dry, short cough points to adhesions high up in the chest, whereas if these adhesions are lower down, the cough will be more prolonged. Dr. Charles A. Leale cited several cases that showed how much can be accomplished in empyema without surgical interference. There seems to be a sort of revulsion of feeling in regard to thoracentesis, for in this discussion, Dr. Thomas H. Manley, of New York, and Dr. Donald McLean, of Detroit, inveighed against its use. Regarding incisions into the chest in empyema, Dr. Dandridge said that while it was exceptional for him to treat empyema without incision and resection of the ribs, aspiration certainly possesses one important advantage, viz., that it maintains the negative pressure that so materially aids the expansion of the lungs.

Dr. Austin Flint, of New York, made some remarks in the evening on

FERMENTATIVE DYSPEPSIA.

He is firmly convinced that fermentation in the alimentary canal is due to micro-organisms, and consequently he favors the use of anti fermentatives. An experience of nearly a year with bismuth subgallate had led him to look upon it as far superior to all other remedies of this class that be has employod. It may be given in doses of five grains, in capsules or in tablets. He had followed his father's well-known practice of giving salicin in these cases, and although the results in many cases were very satisfactory, they were not comparable to those obtained with bismuth subgallate.

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Those who study the various methods advanced from time to time for amputatation at the hip joint will be interested in certain statistics presented to the Association by Dr. John A. Wyeth, of New York, regarding his well-known "bloodless method." He has collected thirty-nine cases in which the method had been pursued, and the reports are the more valuable, as they represent the work of a large number of operators of all degrees of skill. In thirty-five of the cases, the amputation was performed for disease, and in four for injury. Five of those operated upon for disease died, giving a mortality of 14 per cent; and all of those in which the operation was performed for injury succumbed, giving a mortality of 100 per cent. It should be said, however, that the latter were chiefly cases of severe railroad, crushing injuries, and hence the mortality after any operation must necessarily be very high. The operation had been before the profession since 1890, and it spoke for itself.

The question of the voluntary commitment of the insane to asylums was brought up by a paper presented by Dr. W. D. Granger, of Westchester County. He said that at the present time the tendency is toward making asylums hospitals, and, as far as possible, individualizing the treatment. Certain insane patients will gladly seek the advantages of asylums if they can do so voluntarily. This has been the subject of legislation in several States, but the trouble has been that after the patients' admission to the asylum they have generally been deprived of their liberty, and treated in almost the same way as those committed involuntarily. The laws of New York State now permit insane persons who are in a condition to fully appreciate what they are doing to voluntarily commit themselves to family asylums, but no time is specified, the patient being allowed to leave whenever he pleases.

Dr. Gustavius Eliot, of New Haven, Conn., contributed an interesting paper on the treatment of enteric fever. He said that as the safety of the patient depends so much upon absolute rest of both body and mind, the physician should make it a rule in every case of fever to be sure that the disease is not enteric fever before giving the patient permission to get out of bed. This condition of perfect rest should be maintained for at least a week after the temperature, morning and evening, has reached the normal. He advised beginning the treatment by administering from seven to ten grains of calomel on alternate days for four days, and then following this by the administration of iodin and carbolic acid, well diluted. He was sure that the calomel treatment not only brings about immediate amelioration in symptoms, but it also really shortens the duration of the disease. Dr. George Douglas, of Chenango County, and Dr. John H. Martin, of Otsego County, also advocated the calomel treatment, and expressed their disapproval of giving alcoholic stimulants in enteric fever. Dr. E. R. Squibb said that the beneficial action of calomel in enteric fever was probably due to the fact that when it is ingested it is first converted into an albuminate, and then slowly decomposed into the bichlorid, so that its antiseptic action was called forth gradually but continuously. In order to secure this gradual action, calomel should be given dry on the tongue, so that it may be quickly converted in the stomach into the albuminate.

Dr. Donald McLean in presenting some surgical memoranda remarked that a large experience with ununited fractures of the long bones had taught him that the most common cause of non-union was excessive violence at the time of the fracture. In cases of amputation at the hip-joint he uses the aortic compressor, and greatly prefers it to Wyeth's method of controlling the hemorrhage.

Another interesting prepared discussion took place on the second afternoon, and was on the treatment of appendicitis. Dr. Frederic S. Dennis, of New York, who opened this discussion, stated that about 50 per cent of the cases of inflammation in the region of the appendix go on to resolution, and only about 11 per cent relapse. He did not approve of operation unless urgent symptoms had existed without abatement for forty eight hours. Errors in diagnosis are very frequent even among experienced and eminent practitioners, and the operation cannot be considered in itself as free from danger, although some would have us believe it a very trifling affair. The fact that one instrument-maker in New York has sold within the past year six dozen special trusses for ventral hernia occurring after this particular operation is in itself very significant. Dr. John W. S. Gouley, of New York, took the same conservative position with reference to the treatment of appendicitis, but admitted that, while in at least half of the cases an operation is not required, there are times when a life might be saved by very prompt resort to operation. Dr. Joseph D. Bryant, of New York, as a result of numerous observations carried on in the dead-house of Bellevue Hospital, had found that a foreign body was present in the vermiform appendix in about 70 per cent of all male subjects and 40 per cent of females. The "McBurney point" can no longer be considered characteristic of appendicitis, for it has been found in other conditions, and besides this, examinations have shown that the position of the *caput coli* is very variable, and in a large percentage of cases is not in the immediate vicinity of this "point." If acute symptoms are present, he would not postpone operation longer than three days. Rigidity of the rectus muscle is, in his opinion, more reliable as a guide than the presence of a tumor in the ileo-cecal region. Of course, if the symptoms apparently indicated perforation, immediate operation was demanded. Dr. J. A. Wyeth favored an early resort to exploratory operation, for, not only did he consider this the safer course, but there also is less likelihood of ventral hernia following the early operation.

In speaking of the proper mode of introducing the male catheter into the bladder, Dr. Douglas Ayres, of Montgomery county, pointed out that by pressin down on the soft parts over the pubes, the suspensory liga-

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ment will be relaxed, and the introduction of the instrument in some cases greatly facilitated. Dr. Gouley exhibited an exact model in bronze of the catheter found in the ruins of Pompeii. It is of the sigmoid form, and is distinctly conical, and has a single eye near the vesical extremity. Dr. Gouley is of the opinion that the catheters at present made in this country are far superior to those of foreign manufacture.

A rather novel idea was brought forward by Dr. William Finder, of Rensselaer County, in a paper entitled

RESEARCHES ON THE EFFICIENCY OF VACCINA AFTER TYPHOID FEVER.

He had found that a number of persons who had been recently ill with enteric fever were especially susceptible to vaccination, and, after verifying these results by numerous observations extending over a number of years, he ventured to present these views to the profession, so that further observations might confirm or disprove the theory that enteric fever dissipates the protection conferred by vaccination. It is his practice now to revaccinate the patients after an attack of enteric fever.

As a sort of offset to the general enthusiasm over pelvic surgery, Dr. T. J. McGillicuddy, of New York, presented a paper entitled

A PLEA FOR THE NON-OPERATIVE METHOD OF TREATING DYSMENORRHEA, PELVIC INFLAMMATION, AND PELVIC ABSCESS.

His plan is to stimulate the portal circulation by free use of hot water administered by mouth and by rectum, and thus promote the absorption of pelvic exudates. He took the position that pus can be absorbed, and that, therefore, one should not be too hasty in condemning such cases to operation.

In view of a circular-letter sent out by the American Medical Association asking for an expression of opinion as to the advisability of amending the Code of Ethics, the Association ordered the following communication to be sent:

"In reply to the notice that the American Medical Association had requested the State medical organizations in affiliation with that body to express their wishes in reference to any changes in the Code of Ethics, the New York State Medical Association has to state that it has made that Code one of its foundation-stones, and that it is entirely opposed to any alteration therein. This is the result of a full reconsideration of the subject, and after an experience of ten years of organization under the Code."

Dr. Thomas D. Strong, of Chautauqua County, was elected President for the ensuing year.

Executive Committee of the Congress of American Physicians and Surgeons. — A meeting of the Executive Committee of the Congress of American Physicians and Surgeons was recently held at the house of the Chairman, Dr. Landon Carter Gray, there being present Dr. A. L. Loomis, President of the Congress; Dr. H.P. Bowditch, representing the Physiological Association, Dr. D. B. St. John Roosa, of the Ophthalmological Association; Dr. Abram Jacobi of the Pediatric Association; Dr. P. A. Morrow, of the Dermatological Association; Dr. Jas. B. Walker of the Climatological Association; Dr. R. W. Taylor of the Genito-Urinary Association; Dr. W. T. Lusk of the Gynecological Association; Dr. F. J. Shepherd of the Association of American Anatomists; Dr. L. McLane Tiffany of the American Surgical Association; Dr. Wm. H. Welch of the Association of American Physicians, and Dr. Landon Carter Gray of the American Neurological Association. A local Committee of Arrangements in Washington was appointed as follows:

Dr. S. S. Adams, (Chairman) representing the Pediatric Association; Dr. John S. Billings, the Surgical Association; Dr. H. C. Beyer, the Physiological Association; Dr. S. O. Ritchie, the Otological Association; Dr. S. C. Busey, the Gynecological Association; Dr. W. W. Johnson, the Climatological Association; Dr. J. Atkinson, (Baltimore) the Dermatological Association; Dr. Wm. H. Welch, (Baltimore) the Association of Physicians; Dr. I. C. Rosse, the Neurological Association; Dr. Samuel Theobald, the Ophthalmological Association; Dr. D. W. Prentiss, the Genito-Urinary Association; Dr. Frank Baker the Anatomical Association.

It was arranged that the following subjects should be discussed by the Congress at its next meeting in Washington in the latter part of May, 1894:

The Climatological Association: "Sewer Gas;" Genito Urinary Association: "The Surgical Kidney in its Clinical Aspects;" Dermatological Association; "Leprosy in the United States;" Laryngological Association; "Intra-Nasal Surgery;" Gynecological Association; "Conservative Treatment of the Female Pelvic Organs; Neurological Association; "The Effects of Infectious Processes on the Nervous System."

One Association is yet to select a subject for discussion.

Dr. W. H. Carmalt, of New Haven, Conn., resigned from the sub committee deputed to take charge of the organization of the Congress, and Dr. Wm. H. Welch of Baltimore, was appointed in his place, so that the committee now consists of Dr. A. L. Loomis, President of the Congress; Dr. Landon Carter Gray, Chairman of the Executive Committee; Dr. Newton M. Shaffer, Secretary of the Executive Committee, and Dr. Wm. H. Welch.

Northwestern Ohio Medical Association. —The forty-seventh semi-annual meeting of this association was held at Toledo, Ohio, Thursday and Friday, Dec. 14 and 15, 1893.

The following essays were read:

Extra Uterine Pregnancy, W. N. Yost, Findlay.

Membranous Croup, W. A. Dickey, Tiffin.

Neuroses of the Stomach, M. Stamm, Fremont.

Tumors of the Breast, Dudley P. Allen, Cleveland.

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The Uric Acid Diathesis, Clem. D. McCoy, Kenton.

Report of Two Cases of Operation for Movable Kidney, August Rhu, Marion.

Disinfection and Sterilization, Charles Graefe, Sandusky.

Prophylaxis, J. R. Clark, Bluffton.

Esophagotomy for the Removal of a Buckeye—Recovery, W. D. Hamilton, Columbus, O.

Experiences in Surgery of the Gall Bladder, Illustrating Important Points in Diagnosis, Chas. A. L Seed, Cincinnati, O.

Report of Case with Treatment, D. H. Brinkerhoff, Fremont.

Injury of the Cervical Vertebræ, G. W. McGavern Van Wert.

When is Abdominal Section for the Relief of Peritonitis Demanded, T. M. Gehrett, Deshler.

Report of a case of Amputation at the Hip Joint, N. P. Dandridge, Cincinnati, O.

Physiological Action and Therapeutic uses of Ergot, A. S. Rudy, Lima.

President's Annual Address, C. A. Kirkley, Toledo.

Early Diagnosis and Operation in Cancer of the Uterus, C. N. Smith, Toledo, O.

The Functions of the Brain, J. H. Calvin, Huron.

Deafness—Its Effect upon the Voice and Intellect, Thos. Hubbard, Toledo.

Electro-Therapeutis as Applied to Surgery, W. J. Herdman, Ann Arbor, Mich.

The Physician and the Clinical Thermometer, F. H. Schlink, Delphos.

American Public Health Association.—At the annual meeting of the American Public Health Association, held at Chicago, Oct 9–14, 1893, the following resolution offered by Dr. Henry P. Walcott of Massachusetts, was adopted:

Resolved, That the American Public Health Association again urge upon Congress the necessity of the appointment of some officer with general sanitary authority in connection with the National Government.

That the functions of such an authority are of sufficient importance to demand the exclusive attention of the best instructed sanitarian.

That such authority should be enabled, from time to time and under proper regulations, to secure the advice and cooperation of State Boards of Health.

IRVING A. WATSON, Secretary.

Concord, N. H., Oct. 25, 1893.

Change of Date of Meeting.—Official Notice.—In order to enable the State Medical Societies to send instruction as to their action upon the matter referred to them by the American Medical Association at its recent meeting at Milwaukee, and for other reasons, the time of meeting of the Association at San Francisco, has been changed from the first Tuesday in May to the first Tuesday in June, 1894.

WILLIAM B. ATKINSON, Permanent Secretary. JAS. F. HIBBERD, President-Elect.

NOTES AND ITEMS

The Twenty-Fifth Quarterly Meeting of the Austin District Medical Society will be held in Austin, Texas, Thursday, December 21, 1893.

The annual meeting of the Western Association of Obstetricians and Gynecologists will take place at Des Moines, Iowa, Dec. 28 and 29, 1893.

The "Medical Review" Pocket Reference Book and Visiting List, Perpetual, price 75 cents, published by J. H. Chambers & Co., St. Louis, Mo., is a favorite with very many physicians. It is arranged especially with a view to furnishing what the practitioner needs at the bedside. Its emergency department is especially commendable.—Nashville *Journal of Medicine and Surgery.*

To Quiet Pain.—We have often wondered whether a substitute could be found for morphine. The temptation to use this drug is often so great, its effects are many times so charming, that the young physician especially is inclined to administer it too often. When we consider on the other hand, some of the dire effects of this powerful drug, we are all the better prepared to welcome any substitute that will be less deleterious in its effects. The more we become familiar with phenacetine, so much the more are we impressed with its great value. It certainly has a prominent place already in our list of valuable drugs. It acts promptly and effectively and quiets pain to a marvelous degree. We believe the more the drug is used so much the greater will it take the place of the preparations of opium.—*Food*, August, 1893.

A New Medical Novelist.—Dr. Arabella Kenealy is the writer of a work of fiction, entitled "Dr. Janet of Harley Street" (N. Y. *Med. Jour.*), which has reached its fourth edition. She is said to have gone through a complete training in medicine with the express purpose of employing the knowledge thus gained in the construction of novels. Early in life she had displayed a good literary talent, and conceived the original notion that she was deficient in that knowledge of human nature and human motives which medical study would supply her with. She determined, therefore, to bury herself for the requisite number of years away from the literary world and obtain a medical degree, although in the eyes of many of her friends these years of study seemed little better than a waste of time. But her self estimate appears to have been substantiated.

Alfred Ludlow Carroll—In Memoriam.—The members of the Council of the New York State Medical Association deeply mourn the loss of their beloved, erudite, scholarly and gentle colleague, Alfred

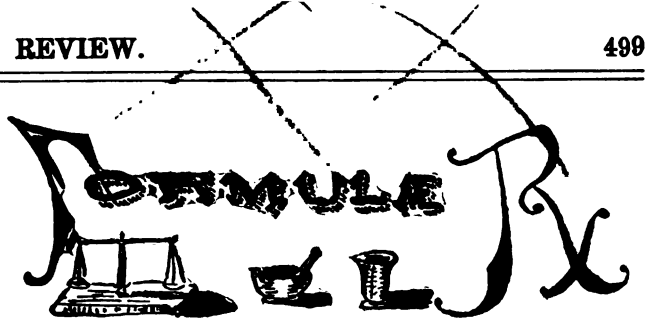
Ludlow Carroll, M.D., who has labored so well and so assiduously for the Association, for the profession and for the people, as a wise councillor, as the editor of the Association's Transactions, as a prolific contributor of scientific material, as a promotor of the honor, dignity, and advancement of medical science, and as one of the foremost sanitarians in the land.

The Council has therefore resolved that their high appreciation of the noble qualities and of the scientific accomplishments of their late gifted and lamented colleague be recorded in this volume of Transactions, and in the medical journals, and that a copy of the above be transmitted to the family of the deceased.

E. D. Ferguson, M.D., Secretary.

Done by the Council, Nov. 4, 1893.

Consulting Physicians.—Of consulting physicians proper, that is to say, physicians who only see patients by and with their ordinary medical attendant, there are few, if, indeed, there be a single one. At present all physicians, whatever their social or professional standing, are to all intents and purposes general practitioners in that they never refuse a fee from a patient presenting him or herself at their far too hospitable doors. One of the correspondents who helped to keep the ball rolling throws out the suggestion that the College of Physicians should institute a special list of physicians declaring their formal intention to act as consultants pure and simple. The suggestion commends itself, but for that very reason there is very little likelihood of its being adopted by that ultra-conservative body the Royal College of Physicians. We have often called attention to the absurdly low rates at which medical "stars" consent to see private patiants, thereby competing most unfairly with the general practitioner, who suffers from this invasion of his prerogative from above as well as from the incessant and steadily progressing competition by the out-patient departments of hospitals, provident dispensaries, *et hoc genus omne.* It would, we conceive, be to the interests of all grades of the profession if those who have attained to eminence would consent to raise their fees so as not to trespass on the domain of the general practitioner. As it stands, there is often so little difference that the patient, having once tasted of the delights of "a consultation," is often disposed to throw over the ordinary medical man in favor of rarer consultations at the hands of the consulting physician. It may be that as knowledge advances the difference in scientific attainments and professional acumen between the once widely separated classes in the profession is gradually becoming obliterated. We have long since remarked that now a days consultations are little more than a farce, they being resorted to only to satify the sorrowing friends that all has been done, and the consultant has only to antedate the death certificate, Cases which puzzle the intelligent general practitioner usually puzzle the consultant, so that the benefit derived is purely pyschical.—*Med. Times and Hosp. Gaz.*



Malassimilation of Food and Indigestion.

℞ Pilul. Antiseptic Comp. (Warner & Co.).

Sig. One to three pills.

Nervous Headache.

℞ Antikamnia, - - - - - - - - - ℥ij.
Caffein citras, - - - - - - - - gr.xlviij.
Cocain murias, - - - - - - - - gr.iij.

M. Ft. Chart No. 24.

Sig. One every two hours until two are taken, then three to four hours apart until fully relieved.

Tonsilitis.

℞ Sennine,
Potass. chlorat., - - - - - - - aa ℥j.
Aquæ, - - - - - - - - - fl℥v.
Glycerinæ, - - - - - - - - - fl℥j.

M.

Sig. Use with the atomizer every hour or two.

Chronic Rhinitis.

℞ Sodii boras, - - - - - - - - - ℥ss.
Sodii bicarbonic, - - - - - - - - ℥j.
Aquæ puræ, - - - - - - - - - ℥ij.

Dissolve and add
Acid carbolic, - - - - - - - - gtts.xv.
Tinct. iodi - - - - - - - - - ℥iij.
Listerine, - - - - - - - q. s. ad fl℥vj.

M.

Sig. Use with the atomizer twice or thrice daily.

False Pains of Pregnancy.

℞ Dioviburnia, - - - - - - - - ℥viij

Sig. Dessertspoonful three times a day.

Epilepsy.

℞ Iodide potass., - - - - - - - - ℥iij.
Neurosine, - - - - - - - - - ℥viij.

M.

Sig. Dessertspoonful three times a day and at bedtime. Increase the bromide of zinc as tolerated to twenty grains a day.

Chronic Bronchitis.

℞ Syrup Hypophosph. Comp. (McArthur), - one bottle.

Sig. Teaspoonful three times a day.

Consumption.

℞ Hydroleine, - - - - - - - - one bottle.

Sig. Two teaspoonful after each meal.

Congestive Dysmenorrhea.

℞ Antipuralgos, - - - - - - - - ℥ss.
Alcohol, - - - - - - - - q. s. ad solut.
Neurosine, - - - - - - - - - fl℥j.
Dioviburnia, - - - - - - - - fl℥iij.

M.

Sig. Half a tablespoonful every hour or two.

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Horsford's Acid Phosphate is a well-known and valuable preparation.

For a Fine Cordial of Cod Liver Oil (a new and most excellent combination) address the Katharmon Chemical Co., St. Louis, Mo.

Fellow's Compound Syrup of the Hypophosphites is a standard article.

Phytoline is a successful remedy for the treatment of excessive fat formation.

The Compound Talcum Baby Powder, made by Dr. Julius Fehr, Hoboken, N. J., is a decided success.

We Hear on all sides golden opinions of Freligh's Tablets for throat and lung diseases. For price-list, samples, etc., address, I. O. Woodruff & Co., 88 Maiden Lsne, New York.

Dr. E. M. Brown, of Boston, Mass., says: "I find Sander & Sons' Euca'ypti Extract, Eucalyptol, very serviceable. I am using it in atonic dyspepsia, chronic, gastric and intestinal catarrh, catarrh of the bladder and catarrhal affections of the broncho-pulmonary mucous membrane.

Ingluvin is such a successful article that some are trying (unsuccessfully) to imitate it. The manufacturers, Wm. R. Warner & Co., 1228 Market Street, Philadelphia, have been informed that it is sometimes offered for sale in bulk. This is evidently a base substitution, as they inform the public that they put it out only in one ounce bottles.

PORTLAND, TENN., December 4, 1893.

DIOS CHEMICAL CO., ST. LOUIS, MO.—

GENTLENEN.—I take great pleasure in recommending Dioviburnia and Neurosine in the treatment of hemorrhage and amenorrhea, given in the following manner:

℞ Dioviburnia, - - - - - - - - ℥ij.
Neurosine,
Spt. frumenti, - - - - - - - aa ℥j.
M.
Sig. Teaspoonful in one-half glass of hot water every four hours.

B. P. GILBERT, M.D.

Sozoderma Soap has been favorably reported upon and adopted by a large percentage of the profession in their practice with skin diseases, scald head and other scorbutic maladies of children, we learn of most satisfactory results from its use. Thymoline, its active principle, having a healing effect on a diseased cuticle. This Soap is far superior to the super-odorous carbolic soap used so largely by medical men and surgeons, which is in the highest degree obnoxious to the sense of smell. Messrs. Hall & Ruckell, 216 Greenwich Street, New York, the Proprietors, are mailing samples to physicians, one of which may be had upon application and mentioning this joernal.

Sennine in the Treatment of Female Disorders.—Mr. Yarnell, M.D., of St. Louis, Mo., says: "Since the introduction of Sennine to the profession I have been using it in all appropriate cases and with such satisfactory results that I cannot refrain from recommending it as being valuable for the purposes claimed by the manufacturers. In vaginitis and leucorrhea it is admirable and it has proved especially efficacious in pruritus. An especially obstinate case of the latter with a pregnant woman yielded after resorting to every method that had suggested itself to the writer. Improvement set in at once in this case with the use of Sennine. In this as well as in all other cases of a like character such constitutional treatment was resorted to as deemed expedient and was continued during the local applications which were made not only within the vagina on prepared wool, but were also freely applied externally. This proved very grateful to the sufferer from the beginning, and at this writing the pruritus and irritations is entirely controlled. For ulcerations specific and non-specific it is equally applicable. In chancroidal sores it is my opinion equal to any treatment that can be resorted to,—in short it is valuable in any and all the various antisptic uses for which it is designed and recommended."

For the Teeth.—One of the most skillful dentists in New York gives these rules for the care of the teeth: Use a soft brush and water temperature of the mouth. Brush the teeth up and down in the morning, before going to bed, and after eating, whether it is three or six times a day. Use a good tooth powder twice a week, not oftener, except in case of sickness, when the acids from a disordered stomach are apt to have an unwholesome effect upon the dentine. Avoid all tooth pastes and dentifrics that foam in the mouth; the lather is a sure sign of soap, and soap injures the gums, without in any way cleansing the teeth.

The very best powder is of precipitated chalk; it is absolutely harmless and will clean the enamel without affecting the gums. Orris root or a little winter green added gives a pleasant flavor, but in no way improves the chalk. At least a quart of tepid water should be used in rinsing the mouth. A teaspoonful of Listerine in half a glass of water used as a wash and gargle after meals is excellent; it is good for sore or loose gums; it sweetens the mouth, and is a valuable antiseptic, destroying promptly all odors emanating from diseased gums and teeth. Coarse, hard brushes and soapy dentifrics cause the gums to recede, leaving the dentine exposed. Use a quill pick if necessary after eating, but a piece of waxed foss is better. These rules are worth heeding.

Be assured of the genuine Listerine by purchasing an original bottle.

The Therapeutic Merit of Combined Remedies.—The following excerpt from an article under the above caption, in the *Virginia Medical Monthly*, by Stephen J. Clark, M.D., of New York, plainly outlines the useful combination of two leading remedies in materia medica: "Binz claims specific antiseptic powers for quinia; other writers are in accord with him on this point, and report good results from large doses in septicemia, pyemia, puerperal fever, and erysipelas. It is a germ destroyer of the bacilli of influenza (la grippe). A full dose of quinine and antikamnia will promptly relieve many cases of this disease. In the gastric catarrh of drunkards this combination is valuable. Quina is a poison to the minute organism—sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose of antikamnia and quina will often arrest a commencing pneumonia or pleuritis. This combination is also useful in the typho-malarial fever of the South—particularly for the hyperpyrexia—both quinia and antikamnia, as previously said, being decided fever reducers. The combination of antikamnia with quinia is valuable in the racking headache, with high fever, attendant upon malarial disorders. It is likewise valuable in cases of periodical attacks of headache of nomdefined origin; of the so-called 'bilious attacks'; of dengue; in neuralgia of the trigemini; in that of 'ovarian catarrh'; and, in short, in nearly every case where quinine would ordinarily be prescribed."—New York *Medical Journal*, November, 1893.

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Average Weekly Issue, 10,000 Average Monthly for the Year, 43,333

MEDICAL REVIEW.

A WEEKLY JOURNAL OF MEDICINE AND SURGERY.

VOL. XXVIII. ST. LOUIS, DECEMBER 23, 1893. NO. 26.

ORIGINAL ARTICLES

Case of Fibro-Myxo-Chondro-Osteo-Sarcoma of Branchial Origin.

BY PROF. A. C. BERNAYS, ST. LOUIS, MO.

J. J. E., aged 30, farmer, from Pike County, Mo., called to consult me for the first time on October 6, of the current year, about a large tumor growing on the side of his face and neck. The exact size, location and relations of the tumor can be best understood by aid of the three photographic representations given below.

FIG. 1.

The patient comes from a healthy family; there is no hereditary encumberance of any kind, his father died of dysentery at the age of sixty and his mother still lives and is in good health.

He has always been in good health excepting a few unimportant malarial attacks. His habits have always been regular and temperate. The growth upon his neck was first noticed fifteen years ago, when a small nodule made its appearance about one inch below the left ear. This was not painful and gave him no inconvenience. It gradually became larger and he consulted local physicians regarding it but received no treatment. Five years after the first appearance of the tumor it had increased to the size of a hen's egg. He consulted a prominent surgeon in St. Louis, who told him that the tumor was connected with the sheath of the jugular vein and that the operation of removal would be dangerous and advised no treatment for it, saying, that it might gradually disappear. During the following four years several consultations with surgeons were held and very different diagnoses were made. One surgeon gave it as his opinion that it was an adenoma, another thought it was a sarcoma connected with the jugular vein. Several punctures were made with an exploring needle but no fluid could be found. In the mean time the tumor had grown to be as large as a goose egg and the patient at long intervals felt some sharp lancinating pains in the territory of the auricularis magnus nerve which ran in the subcutaneous tissue over the middle of the greatest prominence of the tumor. The tumor gradually grew until it reached its present size (see Figs. I, II and III) without giving rise to any severe pain or suffering beyond the unsightliness and discomfort caused by its weight.

In the first week of October, 1893, the patient accompanied by his physician, Dr. Duncan, of Clarksville, consulted nearly all the prominent surgeons in St. Louis and all recommended the removal of the growth, but all considered the operation a very dangerous and grave undertaking. I could not agree with this opinion. I made light of the matter, feeling sure that the removal could be safely and quickly done. I believed, as has since been conclusively proven, that the tumor must have started from a rudiment of a branchial arch. This opinion was based on the anatomical relations, the history of its slow growth and its peculiar elastic hardness. I had noticed the same conditions in a case of enchondroma of branchial origin which had given a very similar history, though it was not larger than a hen's egg. It has been my experience with branchial tumors or cysts, that they simply crowd away adjacent structures without causing dense adhesions and that they are not

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very vascular, but are nourished from their capsules after the fashion of ovarian tumors. This tumor was not freely movable, because it was sessile, and had a broad base, it had no connection with the jaw bone which was freely movable behind the tumor. The mo tion of the jaw was not imparted to the tumor, as it would have been had the tumor been of parotid origin.

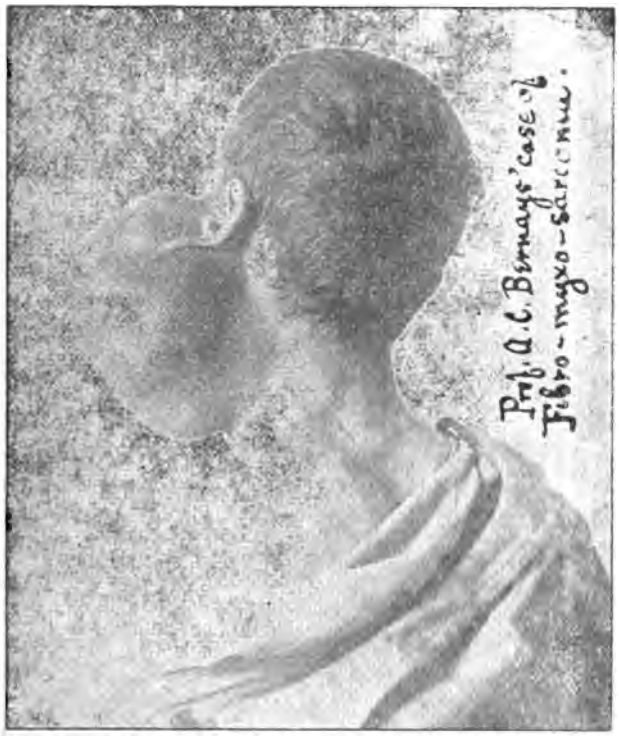

FIG. II.

On October 31, the patient having been shaved and prepared for an aseptic operation there being no indica tion whatever for antiseptics in the case, the operation was done at the Rebekah Hospital in the presence of the senior class of the Marion Sims Medical College.

I had the assistance of the well known surgeons, Dr. H. C. Dalton, Dr. A. H. Meisenbach, Dr. Shanklin and Dr. Miller, of the Hospital corps. Just before making the incision Dr. Block asked me how much time would be required for the operation. I stated that I thought about five minutes would be consumed in removing the tumor, and indeed I was able to finish the enucleation in just three minutes; the entire operation, including the dressing, was done in about fifteen min utes.

The patient being chloroformed, an incision was made beginning at the extended and displaced lapel of the ear (Fig. II) in the direction of the sterno cleido-mastoid muscle but in front of it, over the greatest cir-cumference of the tumor and ending at the point where the distended external jugular vein is plainly seen in Fig. III. The two enormous skin flaps covering the tumor were quickly stripped back and the tumor was torn from its base after clipping the attachments of its capsule with a pair of scissors. A single small artery entered the tumor, a branch of the lingual artery and only a few other small bleeding points required to be picked up by artery forceps, in the large wound. A strip of the redundant covering of the growth was cut away from the anterior flap, the posterior flap was left entire because, it was rapidly shrinking away. It has since undergone the usual atrophy and contraction. The edges of the flaps were united by the continuous silk suture.

FIG. III.

The after-treatment was conducted by Dr. Duncan and is quickly told. There was union by first intention, no elevation of temperature and no suppuration. The dry dressing was used and the incision or line of suture thickly dusted with an antiseptic powder consisting of boric acid and phenol. This preparation has recently been introduced to the profession by the Dios Chemical Company and is put up in a tin box with perforated lid. It is called "Sennine" and is made by a German chemist, whose qualifications I know, and I am glad to recom-mend the preparation, because it is a scientific one, and is put up in such a neat and practical manner, as to readily answer the requirements of the busy surgeon in private, as well as hospital practice. The patient was discharged entirely well on November 28.

The tumor was hardened in alcohol and a micro-scopical examination was made by Dr. Howard Carter, of the City Hospital staff, by Prof. Hugo Summa, and by my assistant, Dr. Shanklin and myself. The first sec-tions made were found to consist only of embryonic con-nective tissue of spindle and round cells and of poly-gonal cells. The intercellular substance was of the gelatinous or myxomatous kind. The diagnosis from

these first sections was myxo-fibroma or fibro-myxo-sarcoma. The tissue was so rich in small round cells and nuclei, that the microscopical diagnosis of sarcoma seemed justified. Sections made later on proved conclusively that there were numerous small islands of a beautiful hyaline cartilage desseminated through the entire tumor and I found true bone in several places. The hyaline cartilage in other sections was invaded by osteoblasts and layers of bone were deposited in the cartilage. Some sections show the fibrous connective tissue, the myxomatous tissue and the bone and cartilage side by side making a beautiful object for the staining and demonstration of different forms of the connective tissue group.

Based upon this microscopical finding I have classified the tumor as a *ficro-myxo-chondro-osteo sarcoma.* That it is of branchial origin is proven by its blood supply from the lingual artery, its location and its histological structure.

No. 2715 Locust Street.

Hysteria and Allied Neuroses.

BY F. WALTER, M.D, PERRY, MO.

Read before the Columbia Medical Association, Bowling Green, Mo.' Nov. 7, 1893.

It is my pleasure to call your attention in a cursory manner to that large and interesting section of nosology comprising a variety of distinct and clearly defined diseases which form a large contingent of those cases presenting themselves in the daily practice of each of you for consideration and treatment, I refer to those affections embodied under the generic term of neuroses. The modern trend of medical thought has especially been preoccupied with a branch of our science heretofore much neglected and surrounded by a halo of mysticism and absurd hypotheses formulated to explain and account for the symptoms which the skill of microscopy and science of pathologico-anatomy was incompetent to solve at the autopsy. This effort has been rewarded by the accretion of a few facts to our knowledge which have the effect of placing in a new light these diseases, facilitating our conception of their essential nature and transposing our vague notions regarding them upon a more comprehensible and tangible basis. For many years during the reign of the humoral pathology the presence of a train of symptoms referable to the nervous system and for which no pathological substratum could be demonstrated were attributed to the presence of an undue quantity of bile in the system, this theory once taught by medical men is so firmly held by the laity that in many affections the enunciation of this doctrine seems to be entirely satisfactory to the patient if we are to judge by the beatitude of enlightenment and the mental quietude which comes with a consciousness that the cause of their malady is fully understood—later came other theories which in their conception embraced only partially or incompletely the facts with which they dealt; such was the doctrine of sympathy or eccentric origin of neuroses among the irritation or disturbing factors of distant organs which were thus supposed to be the cause of various forms of nervous derangement may be mentioned gastric, uterine and ophthalmic affections. The general fact that a source of disturbance whether felt or unfelt in one part or organ of the body might be the cause of suffering or derangement in another,more or less remote from it, has ever been a matter of observation. The apparent connection between attacks of migraine and gastric derangement seemed all but conclusive on this point; frequently an attack of vomiting terminating as if by magic a prolonged and severe paroxysm of hemicrania. The connection between errors of refraction, such as astigmatism and hyperopia as well as muscular asthenopia has been strongly insisted on as being the cause of various general morbid conditions brought about by the accompanying eye strain; and again so strongly were affections of the uterus supposed to be responsible for hysteria that this view is still reflected in its etymology; a further corroboration of this view was furnished by the apparent fact that this was a disease entirely peculiar to women. More recent are the views which transports to the domain of pathology the mutations which occur during paroxysms of nervous disease in the quantity of circulating blood within the brain. The fallacy of the hyperemic and anemic theories has however become so patent that these positions are no longer seriously defended. It has been repeatedly observed at the autopsies of various forms of poisoning, such as alcohol, opium, belladonna, etc. that the every morbid appearance to be found was a hyperemic condition of the brain. So in the neuroses under consideration there must be other modifications produced in the brain not demonstrable by the scalpel but known only by the different symptoms during life. The cerebral congestion is not the cause of the particular phenomena produced by the above named substances the congestion is only one element of the morbid condition to which they give rise; a secondary element, the intensity of which is not even proportionate to the gravity of the symptoms; a like relationship and condition is now thought to exist in numerous diseases formerly attributed to hyperemia of the brain, closely allied and supplementary to the above is the theory which brings as an aid to the vascular, in order to explain many affections evidently due to a more localized disturbance of the circulation than is compatible with the supposition of a general cerebral hyperemia, the vaso-motor theory. Thus certain portions of the sympathetic nerve were thought to be the seat of irritation in different neuroses modifying the circulation in certain limited areas of the brain producing a perturbation of function and lack of proper nutrition, this result being produced by an altered tonus in the bloodvessels; thus, for migraine is described the angeo-spastic and the angio paralytic types, pressure on the carotid artery aggravating the

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symptoms of the former and relieving those of the latter. The theory of nerve storms has also been put forward to explain nervous diseases and consists in a periodical discharge of nervous force from certain nerve cells, just what the causes are inducing nerve cells to act in this peculiar manner has never been very satisfactorily stated. The phenomenon has been likened to certain physiological processes such as sneezing, here an eccentric irritation sets in automatic motion for conservative purposes certain respiratory muscles, but in this the analogy to pathological processes as observed for instance in epilepsy in which a primary vice or morbid condition of the centres is supposed to cause the disease is certainly not very striking. A mere mention of these views as held at different times by the profession has here been made to make their fallacy all the more apparent when we consider the number of diseases once held as being purely functional in character with the advance of science placed upon a well defined pathological basis. Thus a number were found to be of an infectious nature. Hydrophobia, tetanus, chorea, etc. The symptomatology of those diseases is explained by quite another view which while it does not ignore any facts embraced by the different theories once held for explanation assigns them certainly a different value. As has been well established it is the toxines generated by bacterial growth which act as the disturbing factors in the diseases alluded to by their selective affinity for certain parts of the nervous system; the entire clinical picture of a certain group of diseases is produced by analogy, a similar cause has been sought all along the line of nervous affections nor has the search been entirely invain although the diseases yet styled neurosal have not been placed upon so clear a pathological basis thus in the major forms of hysteria epilepsy and all the psychoses with perhaps the sole exception of senile dementia the urine has been found to contain highly toxic properties, just what those bodies are chemistry has not determined, but when injected into the circulation of rabbits the urine produces convulsions, coma and death.

Control experiments with urine voided by the same patients during quiescent periods produced no such result. To those not satisfied with the mere clinical manifestations of disease such a view had impressed itself for some time, thus the late Austin Flint writing of epilepsy expresses his belief in a toxic condition of the blood. Just where and how these poisonous substances are produced is not established as yet but the question seems to turn upon a toxemia by way of the gastro-intestinal canal or by absorption of products the result of a faulty metabolism of the tissues. For this latter view uric acid has been attempted to be made responsible especially for epileptic paroxysms to account for the periodicity or approximate periodicity which many nervous diseases observe. It has been supposed that this highly insoluble substance was stored in the liver and spleen and then through agencies which increased the alkalinity of the blood, rendering it capable of holding a larger quantity in solution it was dissolved out thus producing an attack during its elimination from the system. This method of depuration also serving to explain the interval of health during which a patient might expose himself with impunity to such exciting causes as prior to the attack would be sure to precipitate that which otherwise might have been delayed for several days or weeks. However a more careful examination of the urine before, during and after an attack has failed to corroborate this view. That a faulty chemical change especially of proteid substances in the intestinal canal may and does produce general disturbances of the nervous system is a fact of every day observation, frequently a mercurial is prescribed for various morbid conditions for which there could be no explanation but a toxemia by way of the intestinal canal. The offending substances are thus either neutralized or evacuated leaving the symptoms at once to disappear. In our practice occurred a case of protracted hysteria during a coma of 5 days duration a diarrhea developed succeeding a previous condition of constipation the coma suddenly disappeared and the general symptoms were much improved. In such cases the conclusion is irresistable that the intestinal contents stood in a causative relation to the symptoms. In thus accounting for many cases of hysteria we will not loose sight of the close analogy borne to other diseases of a more specific nature, for example tuberculosis, in which a proper soil must exist in order for the disease to develop. Vitiated nerve centers such as are produced by various infections, rheumatism, typhoid fever etc. or a hereditary instability of the nervous system are the prerequisite conditions, the exciting cause is then supplied by a toxic condition of the blood; this still further reduces the healthy functioning of those centers presiding over the digestive processes, a further enfeeblement, insufficiency or otherwise faulty condition of the gastric and intestinal juices results and thus is established a vicious circle in the vegetative processes of life. In those acute cases of hysteria which recover in a comparatively short space of time the admission of a local point of infection is not difficult, but how about those wearisome cases of hysteria and neurasthenia which are prolonged for months and years, if we admit as correct the theory of immunity in infectious diseases as being due to retained toxalbumin in the blood we might here also assume in explanation the constant retention by the circulation of similar substances. The nerve cells like a plant in arid soil do not thrive and a chronic depraved state of the nervous system is the result. The particular type of neurosis is thus determined by the character of the toxic substance taken into the circulation. As is shown by the transition in the same individual of one nervous affection into another for example migraine disappears to be replaced by epilepsy and the epilepsy to disappear on the recurrence of migraine. It is probably this class of cases and those in which a molecular change has been wrought in the ganglionic cells by the action of the

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offending substance that disappoint us in treatment. If the above view embraces the true condition as found in hysteria and other neuroses we have suggested to us a rational line of treatment; not that we may hope to create a vigorous, smooth going nervous apparatus out of one congenitally defective but that the paroxysms may be prevented or mitigated and made to disappear if already present. Arrest one link in the cycle of morbid processes we may strive to inhibit or arrest by antiseptic measures the formation of those toxins in the gastro-intestinal canal which, when absorbed, have been shown to be the cause of the paroxysm. In the interparoxysmal period all those measures of hygiene and psychical treatment should be employed to elevate and keep at a maximum the tone of the nerve centers. We should not relax those measures even in those chronic cases which at times develop insidiously or more frequently follow in the wake of infectious diseases. If retained toxalbumins in these cases prevent recovery there is yet a likelihood that under favorable conditions the nerve centers will grow accustomed to this poison and resume proximately healthy function as is the case in tobacco, alcohol and morphine subjects.

Dermatological Notes.—Sebaceous Cyst.—Herpes Progenitalis.

BY A. H. OHMANN DUMESNIL, A.M., M.D., ST LOUIS,

Chairman Section on Dermatology, American Medical Association; Late Executive President Section on Dermatology, Pan-American Congress.

Sebaceous Cyst.

It might seem to be a work of supererogation to speak of the proper treatment of sebaceous cyst of the scalp, in view of the fact that writers on surgery and on dermatology have apparently spoken of the matter in a manner leaving nothing more to be desired. Yet, the unfortunate experiences of some, which have come within the writer's knowledge, are of such a nature that a few words devoted to the subject would not appear untimely. I do not purpose speaking of any variety of steatoma beyond that which exists upon the scalp. In fact, whatever may be said of this variety is equally applicable *mutatis mutandis* to the same kind of growths located in other portions of the integument.

Sebaceous cyst, as is known, is a growth due to the retention of sebum. A sebaceous gland has its duct closed for some reason or other and its lining membrane continues secreting the fat or sebum. This accumulation whilst slow is continuous and there being no outlet it necessarily exerts pressure. The scalp, having for its foundation, the skull, it stands to reason that the accumulated sebum manifests its presence by raising the integument. The result is a tumor like mass which is at first barely perceptible but steadily increases in size. The scalp, which is subjected to a continuous and ever increasing pressure becomes thinner, atrophy sets in; and, in advanced cases or those of long standing, the atrophic process cuts off all the nutrition of the hair leaving the integument denuded of these normal appendages. The sebaceous cyst from being almost flat and dome-shaped, will assume a comparatively large size, standing up above the general surface of the scalp a comparatively high distance, being sessile or somewhat pedunculated. Its integumentary surface assumes a rosy hue and small arteries may be seen traversing it. It is when such a condition supervenes that sebaceous cysts are ordinarily called "wens," from a fancied resemblance to toadstools.

The cause of this condition seems to lie in traumatic influences more than in any other. So far as I can ascertain, barbarous tribes are not so frequently the subjects of sebaceous cyst of the scalp as those who are members of enlightened races. Among the latter it is also a notorious fact that women are more often troubled in this way than men. This agrees with the claim of a traumatic origin in this way: Women among enlightened races are addicted to the use of hair-pins. In dressing the hair these are employed to support the various coils and keep them in proper adjustment. In sticking in the hair pins it is no unusual thing for one of the blunt points to engage itself in the opening of a sebaceous gland and thus produce a lesion which leads to a complete and permanent closure of the orifice. The same thing results from a similar wound produced by the tooth of a comb, thus accounting for the condition in males and females alike. That there are other causes no one would doubt, but those mentioned are in all probability the most common.

Theoretically, the treatment of sebaceous cyst of the scalp is a very simple matter. It may be summed up in one word—extirpation. In actual practice, however, it implies much more. The removal of such a non malignant growth should be one totally devoid of any danger and followed by rapid recovery, two essential conditions which have, unfortunately, not always been secured. For it must be remembered that the scalp is a peculiar structure so far as operative interference is concerned. Erysipelas is likely, at any time, to follow surgical procedures in this locality; and it is for this reason that the older surgeons always advised against suturing the scalp. But with modern antiseptic methods this danger has appeared to a great extent to be, in some instances, replaced by toxic phenomena of an alarming nature and directly traceable to the antiseptics employed.

It was to obviate this feature that the method of removing steatomata by electrolysis was devised, but it does not seem to have met with much favor at the hands of the profession. Essentially slow, it also entails a slow recovery; and, necessarily, is inferior to rapid methods followed by quick results. Cutting open the cyst, curetting its interior and packing with ganze or filling it with iodoform, aristol or some other powder is also a necessarily slow method so far as the ultimate result is concerned. And it may be stated that, the

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longer it takes for the healing process, the less satisfac tory is the method. I do not purpose to detail all the methods which have been employed, but will rather speak of one which I have found eminently satisfactory in all respects. It may be briefly summarized as follows: The sebaceous cyst should be cut open in the direction of the long axis of the head. One incision only should be made and this ought to be done with a knife whose blade is as thin as paper and as sharp as it can be made, care being taken that it be perfectly aseptic. It is not necessary to make the incision any deeper than the scalp; in fact, this is much more preferable as it leaves the capsule of the cyst intact and a slight lateral pressure will ofttimes dislodge it whole. If it does not yield to this it can be readily torn out with (aseptic) grappling forceps. To accomplish its extraction a large incision is by no means necessary. Having succeeded in this the cut edges are approximated as closely as possible and Sennine liberally dusted over it. If the wen be small this is all that is necessary; if it be larger a pledget of gauze, over which Sennine has been dusted, should be placed on the wound and secured by a bandage.

A little attention to technical details in applying Sennine as indicated will secure union by first intention and in three or four days union is perfect and definite. With the use of a knife such as recommended the site of the cut can not be discovered even, on account of the thinness of the blade of the instrument.

The fellowing are a few cases recently treated in this manner:

Case I —Mrs. X——, a lady of about 60, has always enjoyed good health. For several years she has noticed a small tumor growing in her scalp near the occiput. At the time she presented herself it had the dimensions of a large filbert, firm and elastic to the touch, inclined to be painful at times. The hair on either side of the proposed incision was shaved so that the entire width of the part thus cleared was one eighth inch. The wen was then cut open as detailed above and Sennine liberally applied after the edges had been accurately approximated. Union occurred *per primam* and in five days the patient was pronounced cured without having ever suffered any inconvenience. It is only proper to add that a pledget of absorbent wool was placed over the operation site every evening and a night-cap worn to prevent tearing the lips of the wound apart.

Case II.—Mr. Y——, a young man of 26, had a sebaceous cyst the size of a large bean, situated at the hair border in the center of the forehead. It had been growing some time and was inconvenient as it was continually rubbed by the sweat band of the hat. In his case a slight lateral pressure, after making the incision, caused the cyst to pop out with its surrounding capsule. He was advised to keep his hat back on his head so as not to irritate the line of cut. Sennine was used as a dressing and in four days the wound was perfectly healed. No scar can be seen.

Case III.—A married woman of 32 had noticed a small tumor growing over the scalp at about the locality csrresponding to the juncture of the coronal and saggital sutures. It was a sebaceous cyst, hemispherical in form, a trifle over a half inch in diameter. It was more or less painful on account of the irritation produced by comb and brush in dressing her hair. The same procedures were employed in this case as in the others, no sutures being used, and Sennine being freely applied. In about a week after the little operation my patient presented herself to let me know that she was cured.

In all of these cases the powder was employed in preference to any solution and care was taken not to apply the powder until the flow of blood had ceased. The hemorrhage amounts to but a few drops and pressure exerted by means of a pledget of bichloride gauze aids in obtaining agglutination of the edges thus securing a more rapid result. The powder acts as an effectual barrier to the entrance of any micro-organisms and secures a dry, clean wound, a condition not so readily obtained from the employment of liquid antiseptics.

For those who prefer the use of ointments to powders it is only proper to add that the same remedy may be used in ointment form in the strength of one to four.

Herpes Progenitalis.

There seems to be but little doubt that all the herpetic troubles are of nervous origin, direct or remote. The peculiar distribution of the vesicles, the nature of the attacks and the subjective symptoms all point to such an origin. In the case of herpes progenitalis in the male, of which I propose to speak more particularly we have a condition to which are attached conditions which make it peculiarly interesting from a therapeutic point of view. It is not only the location of the lesions—on the glans and prepuce—but the fact that the symptoms are so distressing and the superficial ulceration at times so terrifying to the patient that make it a desideratum to offer a method of relief that is both rapid and pleasant to use. We have furthermore the annoyance to which one having the trouble is subjected. One attack is barely disposed of before there is a relapse, and one relapse will succeed another for quite some time and a period of rest supervenes. Bnt the fancied security cannot be depended upon for a fresh outbreak may make its appearance at any moment.

I do not intend to discuss the diagnosis, pathology or other points connected with herpes progenitalis but rather its therapy. Beyond all shadow of a doubt the best treatment in those suffering from a long prepuce is complete circumcision. Moisture, which predisposes to herpes, disappears; the extreme sensibility of the parts is abolished and a release from the trouble follows. There are cases, however, and they are pretty numerous, in which the prepuce is comparatively short (such as in Jews) and still the trouble occurs. Others again absolutely refuse circumcision and demand some other measures. In order to meet these exigencies various means have been resorted to consisting in the employ-

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ment of various salves, lotions and powders of more or less doubtful value and efficiency. In fact, no one would be justified in stating that any one treatment was absolutely certain. It is for this reason that I have some hesitation in advocating a treatment which I have found of value in the limited number of cases in which I had an opportunity of employing it. However, it is worthy of a trial and can certainly not prove deleterious which facts alone lead me to venture mentioning it.

The method consists in treating an attack as soon as it occurs. Each vesicle is opened with a needle knife thus emptying it of its contents. The wall of the vesicle should not be merely punctured but cut so as not to give it an opportunity to refill. In this manner the possibility of suppuration is avoided. After the vesicles have been opened the following powder should be applied:

℞ Sennine,
Zinci stearat co., · · · aa ʒij.
M.
Sig. Apply twice a day.

This should be applied twice daily, the proportion of Sennine being gradually increased until it is used pure.

Should the vesicles have ruptured and suppuration set in, the pure Sennine powder should be applied twice daily: In all cases before applying the powder, be there suppuration or not, the parts should be cleansed by letting warm water drip on them. The rapidity of the healing is marked, as well as the disappearance of the subjective symptoms.

What has just been said in regard to herpes progenitalis in the male is equally applicable to that condition in the female. Should the inner surfaces of the libia be affected the precaution should be taken to insert a very soft cloth of sufficient size to separate the affected structures. In these cases it will be found that the box in which the product is put up is of peculiar benefit, as the removal of the outer cover will show a second perforated one which allows of sifting, a method which recommends itself for its simplicity and effectiveness.

So far as Sennine is concerned it may not be uninteresting to say a few words. It is composed essentially of boracic acid and phenol. It is a good antiseptic and is not irritating. On the contrary it possesses antipruritic properties and has the advantage of being susceptible to use in powder, ointment or liquid form. It is soothing to the end terminations of irritated nerves and is destined to acquire a place in dermatological therapeutics.

The Diagnosis and Treatment of Kidney Maladies.

BY PAUL PAQUIN, M D.

Superintendent of the Gasconade Sanitarium, Lebanon, M .

Notwithstanding the many more or less positive means of diagnosis that we have at hand to-day in the investigation and treatment of kidney diseases, it is still the practice among many to rely entirely on the spmptoms explained by the patient or revealed to the practitioner by physical examination of the body and naked eye inspection of the urine. Sometimes a test is hastily made for sugar and albumen, but here analysis ends. Among the cases sent to the Gasconade Sanitarium, I have received repeatedly, sufferers from chronic affections of the kidneys for the diagnosis of which neither chemic or microscopic analysis had ever been made. I have one patient particularly in my mind at this moment who had been treated for five years by one physician for obscure kidney difficulty without ever having had his urine analyzed. The patient had lost some fifty pounds in seven or eight months, and was fast running to his grave and he did not know that he had diabetes, nor did his doctor realize it. I remember also an instance of a typical case of Bright's disease, treated for over a year for dyspepsia exclusively (of which he was suffering too, it is true) without having had his urine analyzed. In a place where we see so many chronic diseases as is usual in a sanitarium, and where we analyze the urine of almost every patient systematically, and record the results, we gain very important informations which emphasize the value of chemic and microscopic urine analysis in kidney affections and even in those maladies in which kidney diseases are not at all suspected. Indeed I think it would be a very good rule for physicians to put in practice to make at least the most important tests of the urine before prescribing a treatment for any chronic disease.

As to the treatment of kidney diseases, allow me to point to a general principle which seems to hold good in most of chronic kidney affections; it is the use of excessive amounts of pure water. Of course the water must be very pure, and it must be taken in such quantities that it will be secreted by the kidneys very copiously and with a density varying between ten and twenty. I mean by pure water, that it must not only be free from organic substances, which condition would perhaps, not wholly proscribe it for a kidney wash, but it must be free chiefly from mineral substances. The value of water in kidney diseases depends chiefly on its purity. A patient may safely swallow enormous quantities of it,—two, three, four glassfulls, four, five or six times a day or oftener. My experience with various mineral waters in comparison with pure water, such as flows from the Lebanon (Mo.) well or such as may be produced by distillation and aeration, leads me to the use of pure water in preference to any other. In any lethemic condition, pure water gives as good and often better results than any so-called medicinal waters. The special medication of kidney diseases, of course, is to be regulated according to the nature of the malady in hand, but water should be considered as the necessary adjunct in general treatment, if not the most reliable aid in the cure of kidney maladies. Even in diabetes sometimes, where so much water already passes from the system, pure water is often very useful. This at least, has been

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my experience. In kidney diseases then, the first step is careful analysis of urine, then a copious use of water as general eliminative treatment.

Sennine in the Treatment of Female Disorders.

BY M YARNALL, M.D., ST. LOUIS, MO.

Since the introduction of "Sennine" to the profession I have been using it in all appropriate cases and with such satisfactory results that I cannot refrain from recommending it as being valuable for the purposes claimed by the manufacturers. In vaginitis and leucorrhea it is admirable and it has proved especially efficacious in pruritus. An especially obstinate case of the latter with a pregnant woman yielded after resorting to every method that had suggested itself to the writer. Improvement set in at once in this case with the use of "Sennine." In this as well as in all other cases of a like character such constitutional treatment was resorted to as deemed expedient and was continued during the local applications which were made not only within the vagina on prepared wool, but were also freely applied externally. This proved very grateful to the sufferer from the beginning, and at this writing the pruritus and irritations is entirely controlled. For ulcerations specific and non-specific it is equally applicable. In chancroidal sores it is in my opinion equal to any treatment that can be resorted to,—in short it is valuable in any and all the various antiseptic uses for which it is designed and recommended.

It is remarkable how largely preparations of this character enter into the practice of every medical man and how many there are offered. The eligible form in which "Sennine" is presented—its non-toxic and unirritating properties—except in cases of extreme sensitiveness, when it should be mitigated with powdered starch or fuller's earth, and its real therapeutic value must place it at the head of the long list of similar articles.

In referring to "Sennine" it had been my intention to speak of the antiseptics in general—their value—and to refer to a number of cases in detail. This however would be a work of supererogation as medical literature is teeming with valuable papers on this very subject and it is only necessary in view of this fact to place the experience of each observer before the profession so that a just estimate may be formed of each and every preparation that comes well recommended to the medical profession.

A Physician's Gift to San Francisco.—Dr. Levi C. Lane, of San Francisco, has presented to the city San Francisco a large building with two wings, each two stories high, which he has had built for a fully equipped hospital, to be used as an annex to the Cooper Medical College of that city.

EDITORIALS

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Why Has Laparotomy a Favorable Influence Upon Tubercular Peritonitis?

It is a well-known fact that many cases of ascites due to tubercular peritonitis get well upon laparotomy, but the exact reason for this behavior of the diseased peritoneum after this operation is still an unsettled question. Some claim that the action of light is the cause of this change, others attribute it to the adhesive inflammation and agglutination of the peritoneal surfaces, to the action of antiseptics used in the operation, to the changed intra-abdominal pressure, and to the entrance of air into the peritoneal cavity. Based upon the latter hypothesis sterilized air has been passed into the abdominal cavity after evacuation of the ascitic fluid by paracentesis and favorable results have been reported by Mosetig-Moorhof and Nolen-Leyden.

Tumors have been reported to have decreased considerably in size in consequence of exploratory laporotomy and judging from a case of sarcoma observed by Mosetig Moorhof we are inclined to attribute much influence upon neoplasms to the changed intra-abdominal pressure. In this case a large sarcoma, situated between the two layers of the left broad ligament and nearly filling out the whole pelvis, was exposed by exploratory laparotomy. After the abdomen was opened the surface of the tumor gradually became intensely red and some

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small blood-vessels ruptured and drops of blood appeared on the surface of the tumor. The abdomen was closed. When on the ninth day the dressing was removed the tumor was found to be reduced in size and three weeks afterwards it was only of the size of an apple, but, of course, grew again later on. Similar congestions we have also observed upon opening the abdomen, although there was no rupture of blood-vessels, and we were forcibly reminded thereby of the reduced intra-abdominal pressure. If the latter, however, is the cause of the favorable results of laparotomies in tubercular peritonities, then simple aspiration ought to have the same effect as laparotomy. The subject needs further investigation, before we shall be able to determine the real cause of the favorable influence exerted by laparotomy upon the tubercular peritoneum.

The Use of Nitro-Glycerin in Arterio-Sclerosis.

Thomas G. Ashton, M.D., writes as follows in the *Therapeutic Gazette:* But little more than twenty years have elapsed since arterio-sclerosis was first demonstrated to be a distinct and definite disease, and, as is well known, it is to Gull and Sutton we are indebted for this addition to our medical knowledge.

It is necessary for us to fully understand the nature of arterio-sclerosis in order that we may clearly appreciate the reasons advanced for the employment of nitro-glycerin in its treatment. Equally important, also, is it for us to have a clear idea of the drug's physiological actions.

The most commonly accepted theory explaining the manner of the development of arterio-sclerosis is that advanced by Thoma in a number of articles published in *Virchow's Archives.* Thoma finds the development of the disease to depend upon a series of conditions which conform to the following law, viz.:

A slowing of the blood current in an artery that is not at once and completely counteracted by a proportionate contraction of the media leads to a new growth of connective tissue in the intima, which lessens the lumen of the affected vessel and thus restores the normal swiftness of the blood current more or less completely.

According to this law, therefore, the lesion has its origin in the media, which, in some way not known, has lost its tone. As a result of this impairment of the elasticity of the media the artery dilates, and, as a consequence, the normal swiftness of the blood-stream is lessened. The slowing of the blood-current produces, in turn, a hyperemia of the vasa vasorum and a new growth of connective tissue in the intima, with which there is subsequently associated a similar formation in the media and adventitia. So soon as the growth of new tissue reaches such dimensions in any situation that the normal swiftness of the blood current is thereby re established, the sensitive nerves are restored to their normal condition, the hyperemia of the vasa vasorum disappears, and no new tissue forms in the intima until the blood-current again undergoes changes of speed and again makes operative the various factors originally involved in the production of the disease.

Now, let us see how these changes in the arterial walls will affect the various tissues and organs the nutrition of which it is the function of the blood-vessels to provide for. As this degeneration is characterized by a more or less distinct swelling, the compensatory thickening of the intima projects to some extent into the lumen of the vessel and thus interferes with the blood-current. In the same manner is the orifice of the blood-vessel narrowed as its point of branching off from the parent vessel. "Various and grave disturbances of nutrition may, of course, result in the organs to which these branches go, and it is conceivable that often thus a vicious circle is established. Thus, the diseased arteries supply less blood to a given organ than its proper nutrition requires, and local degenerations ensue in the organ. These changed conditions call for still less blood, and there results a further disturbance in the rapidity of the current in the affected artery. This causes further changes in the vessel's intima" (Peabody).

Thus we will find that the same vicious circle that becomes established in the various organs of the body involves with them the arteries themselves. The vasa vasorum, sharing in the general sclerotic change, supply less blood to the arteries than is required for their proper nutrition; further degeneration of the arterial walls follows, calling for less blood for nutritive purposes, which produces, in turn, a slowing of the blood-current in the vessels supplying the arteries; consequently the intima of these vessels becomes the seat of further degenerative changes.

We have found, therefore, that we are dealing with a disease one marked feature of which is a mechanical interference with the blood-current, due to progressive narrowing of the lumen of the blood vessels, and that a necessary result of this obstruction is a lessening of the supply of blood essential to the nutrition of the tissues, resulting in various tissue degenerations.

Let us see now what are the properties of the drug with which we propose, if not to permanently arrest the progress of the disease, at least to ameliorate its most striking and annoying symptoms.

When a dose of nitro glycerin large enough to produce the physiological effects is taken, there follow more or less flushing of the face and a feeling of fulness of the head which, in some individuals, is accompanied by dizziness. These manifestations are the result of a dilatation of the superficial vessels, which, according to Brunton, is due to weakening or paralysis either of the muscular walls of the arterioles themselves or of the vaso-motor ganglia in or near them. That the effects of the drug are not due to its action upon the sympathetic acting upon the muscular structure of the arteries through the vaso-motor centre, he demonstrates by

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showing that the nitrites lower the blood-pressure in animals even after the cord has been divided just below the medulla.

Nitro glycerin, therefore, lowers blood-pressure by producing a dilatation of the arterioles, and it is upon this dilatation of the arterioles that the value of the drug in the treatment of arterio-sclerosis depends. We found that in arterio-sclerosis, because the tissues receive too little blood for their proper nutrition, local degenerations occur, and that these local degenerations, disturbing again the equilibrium of the circulation, cause still further sclerotic changes to occur in the arterial walls By causing a dilatation of the blood vessels, and thereby supply the tissues with a larger amount of blood for their nutrition, not only will the progress of degenerations in the various organs and tissues be retarded, but the course of the disease will also be arrested in the arteries themselves by supplying them, in the same manner, with a larger quantity of blood.

The most important clinical manifestations of arterio sclerosis are directly due to the condition of the blood-vessels which interferes with the blood supply to various organs.

As previously stated, the chief symptoms of arterio sclerosis are due to the malnutrition of various organs resulting from a lessened blood supply; nitro-glycerin relieves these symptoms by increasing the blood-supply of any given tissue. The cardiac hypertrophy, however, so common an attendant upon this disease, is caused by increased peripheral resistance. By lowering the blood-pressure and, according to Bartholow, by removing the inhibition exercised by the pneumogastric nerve, there by lessening the work of the heart, nitro-glycesin results in relief of this condition. The advantages from the use of the drug in attacks of angina pectoris are too well known to require discussion

Because nitro-glycerin lessens arterial tension and thereby diminishes the amount of urine voided and lessens the output of albumin, and because it increases the blood-supply to the kidneys and therefore improves their nutrition and prevents further degenerative processes, is its exhibition advantageous in the renal changes accompanying arterio sclerosis.

Nitro-glycerin is best administered in the form of a centesimal solution, or as tablet triturates, each containing $^1/_{100}$ grain of the pure drug.

Inasmuch as the susceptibility to the action of the drug varies very greatly, the dose cannot be stated in advance. It is therefore advisable to begin, with a dose of $^1/_{100}$ grain, watching its effects, and increase it until the physiological actions of the drug become manifest. In some individuals small doses will continue to maintain the physiological effects of the drug, while in others, as in a case some time since reported by Dr. D. D. Stewart, of Philadelphia, a remarkable tolerance, even to massive doses, becomes established. According to my own experience, those cases respond best to the use of the drug in which small doses continue to maintain its physiological manifestations.

The effects produced by nitro-glycerin upon the pulse vary somewhat, though not materially, in duration in different individuals. In one of my cases the effects of a dose just sufficient to produce the physiological actions did not disappear from the sphymographic tracing for nearly three-quarters of an hour. According to Murrell, however, whose observations upon the subject have been made with great accuracy and have come to be regarded as authoritative, the tracing resumes the normal in less than half an hour. As the effect of the drug is but transient, therefore, the interval between the doses should not exceed two or three hours.

Nitro glycerin tends to arrest the oxygen-carrying function of the red blood corpuscle, and it is therefore important not to give it in doses larger than necessary to produce the desired effects, and during long continued courses of the drug to interpose frequent periods of abstinence from its use.

Arterio-sclerosis is a progressive disease, and it is not claimed, therefore, that nitro-glycerin will effect a permanent cure. It is claimed for the drug, however, that it will retard the progress of the affection and alleviate many of its most distressing and serious manifestations.

The Dangers of Overfeeding in Children.

The *Mercredi Medical* summarizes a recent thesis by Dr. Paul Bellot in which the author calls attention to the frequency of disturbances due to overfeeding, not only in infants at the breast, but also in those who are older and take ordinary food (*N. Y. Med. Journ.*). He has made a study of these disturbances as they affect the digestive canal, the liver and the kidneys, the locomotor apparatus, the skin, and the nervous system. It is not sufficiently recognized, he says, that hepatic colic is apt to attack overfed children, especially those who live in cities and therefore lead a sedentary life not very favorable to the combustion of fatty food. Although less frequent than in adults, hepatic colic is not positively rare in children. Rouisson found concretions in the biliary passages of the new-born, and Hein observed hepatic colic in a child twenty-five days old. Undoubtedly heredity and a sendentary life may of themselves play an important part in the etiology of this morbid assemblage of symptoms, but it is not the less true that it is in a measure to be imputed to overfeeding. By causing congestion of the liver this sets up inflammation of the biliary passages. It follows that the mucus secreted by the glands and these canals acquires an acid reaction and decomposes the biliary acids, which then lose their solvent power and allow pigment and cholesterin to be deposited in the form of small concretions, or biliary sand, the starting point of calculi. Cases of this kind are not rare, and M. Bellot cites one that is very striking.

In common with hepatic colic, nephritic colic is not very rare in children during the second infancy, or even during the period of nursing. Sometimes the new born present uric-acid infarctions in the canals of Bellini, in

the calices, and in the pelvis of the kidneys. The origin of this renal lithiasis before birth is rather obscure, but the diet of the mother and hereditary influences may be considered to play an important part. During lactation overfeeding may be a cause of disease. In the second period of infancy authors commonly recognize the influence of excessive feeding and of a diet containing too much animal food. Similar affections, as Bouley has shown, occur in young animals. As regards the skin, the correlation existing between various skin diseases and gastro-intestinal derangements in children is indisputable, and these gastro-intestinal troubles are very often due to overfeeding, which therefore should be considered as very commonly the primary cause of these different cutaneous affections. According to Brocq, symptomatic skin diseases may be the result of accidental poisoning by drugs, articles of food, or a morbid toxin; or of an organic disease acting in a reflex way; of progressive vitiation of the general condition; or of defective nutritive exchanges. In the case of overfed nurslings, the first and second of these etiological factors do not generally play a part, unless milk on which the children are maintained is of an extremely bad quality, but the same is not true of an organic lesion acting in a reflex way, or of the imperfect nutritive exchanges which undermine the vitality of an organ and make it morbidly vulnerable. In the case of infants subjected to a mixed diet or to a diet containing no milk all four of these causes may come into play.

As regards the genesis of certain skin diseases, such as urticaria, following the abuse of drink, often observed in persons with dilated stomachs, a reflex action upon the cutaneous vaso-motor nerves must be admitted or, in a weaned child, a direct action of ptomaines taken in excess into the system with articles of food. In other cases, on the contrary, and these are the commonest, where it is a matter, for instance, of impetiginous eczema, or seborrhoic eczema, or ecthyma, or different forms of acne, strophulus, etc, the pathogeny is probably different, in that case involving the direct elimination by the sweat glands of volatile fatty acids which, in their passage through the skin, alter the anatomical elements of the integument. Among these various skin diseases there is one—eczema seborrhoicum of the hairy scalp and of the face—that is observed in large, fat children, who assimilate the great quantity of food which they take—that is to say, who bear overfeeding without gastro-intestinal troubles. One point it is very important to recognize—namely, that digestive derangement is not at all necessary to the production of skin diseases in an overfleshy or overfed child. In all these conditions it is a prime requisite of treatment to reduce the amount of food taken.

Emergency Hospital at World's Fair.—There were treated at the World's Fair Emergency Hospital, 18,500 cases, and there were twenty-three deaths at the institution.

ABSTRACTS

MEDICINE.

Pathogeny of Bronchitis.—The relation of bacteria to bronchitis has been elucidated by two recent writers, Marfan and Claisse, (Boston *Med. and Surg. Journ.*).

A large division of bronchitis comprehends specific infectious forms; another division, the non specific bronchitis. Every bronchitis, however, according to Marfan, is infectious.

The specific forms attend measles, whooping-cough, small-pox, influenza, etc., and are dependent on the microbe that causes the disease. These forms are "exogenous" or "hematogenous;" the germ is brought by the air or by the blood. Most bronchites are exogenous, but those of small pox, glanders, malaria and secondary syphilis are hematogenous.

The non-specific infectious bronchites constitute a large and important class. Under this head are included common bronchitis(*a frigore*), the bronchitis that attends chronic naso pharyngeal affections, chronic affections of the lungs and pleura, hay fever, gout, heart disease, Bright's disease, etc. To this division is assigned the bronchitis which is present as a complication in all adynamic and cachectic states, as in infectious endocarditis, diphtheria, typhoid fever, diabetes, etc. Bronchitis is the rule in typhoid fever, but it is only a secondary element, and is not due to the presence in the bronchi of Eberth's bacillus.

Marfan's explanation of bronchitis from "catching cold" is substantially as following:

Acute bronchitis is sometimes occasioned by the respiration of a cold atmosphere which penetrates the bronchi suddenly and violently. But it is not by the direct contact of cold air with the mucous membrane of the respiratory passages that bronchitis is ordinarily produced. It is generally by a sudden chilling of the cutaneous surface, and especially when the body has been overheated by prolonged exercise and is perspiring.

Marfan remarks that some persons have a susceptibility to cold when this is limited to certain anatomical regions; for instance, one will have bronchitis if the feet are allowed to become cold, another, if he remains an instant with arms or chest bare, etc. Moreover, cold and damp climates and chilly seasons have a great influence on the development of bronchitis *a frigore*. The same may be said respecting sudden changes of weather. Infants, old people and feeble cachectic subjects are particulary susceptible, for reasons which are sufficiently obvious.

But how does a chill act in provoking an inflammation of a mucosa? The old medical writers supposed

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that the sweat glands were closed by the cold and that the excrementitious matters of perspiration were retained in the blood. Hence, a general toxemia, with inflammatory manifestations in parts of least resistence. This notion is now abandoneded. Experiments have shown that in animals which are overheated, there is considerable dilatation of the cutaneous vessels; the blood circulates there with force and abundance. If now a sudden chilling is brought about, the blood which distends the peripheral vascular network is cooled in mass and by repercussion cools the organism. The sudden loss of heat causes profound disturbances in the internal organs. Severe congestions result.

But the experimentation stops here, and cannot explain why the fall of the internal temperature engenders bronchitis.

The bacteriological study of the sputa completes the data furnished by experimentation.

Note in the first place, that the upper air-passages and bronchi contain microbes independently of any pathological state. Among these the four following species have been observed which have pathogenic properties: the staphylococcus pyogenes (aureus et albus), the steptococcus pyogenes, the pneumococcus, the pneumo-bacillus of Friedlander. Let now a bronchitis of whatever nature supervene, and it will be seen that these microbes are more abundant in the sputa; new species appear; protei which are pathogenic and even pyogenic when inoculated in animals; two saprogenous microbes, the one resembling Eberth's bacillus, the other, the bacterium colis commune. Cornil and Babes remark that these microbes are found in all the bronchites *a frigore*, in influenzal, tuberculous, morbillous bronchitis, etc. Marfan, beside those above mentioned, has also found the pneumococcus in the exudation of almost all the bronchites which he has examined. Pausini declares that the streptococci are the only micro-organisms met with constanly in the sputa, both in bronchitis and in health. He describes eight different species of these streptococci, several species of fungi, twenty one species of bacilli, ten species of micrococci. Frick has studied the chromogenic bacteria which gives to sputa their green color.

Marfan, in summing up these bacteriological results, asks what conclusion can be drawn therefrom concerning bronchitis *a frigore*? Although the direct demonstration has not been made, it is difficult not to think that all these microbes have a real pathogenic influence Whether they live normally in the respiratory passages or whether they come from the atmosphere, it must be admitted that cold favors their fixation and their pullulation in the mucosa of the bronchi.

The solution of the problem then consists in knowing why the perturbation caused in the organism by the cold, favors this development of micro-organisms. In the normal state the system defends itself against microbes by the bactericidal properties of the serum and the phagocytic properties of the anatomical elements. These two sets of properties are in part dependents on the nervous system. It is likely that the profound perturbation produced by the cold on the internal calorification brings about a disorder of the vaso-motor innervation which causes congestion and places the organism in a state of lessened resistance, and just in those localities (respiratory passage, skin, intestine) where microbes are normally present we see inflammations set in of microbic origin which are properly designated infectious, non-specific.

It is easy to conceive that a first attack of bronchitis diminishes the power of defense of the bronchi and leaves behind certain microbes that are more virulent, and this naturally favors recurrence.

What is said of bronchitis *a frigore* is just as applicable to coryza from cold, and when the two co exist, the explanation may be as follows: Either the cold acting in the same manner on the nasal and bronchial mucosa favors the microbian invasion, simultaneous or successive, of the two mucosæ; or the coryza alone is produced by the cold, and the microbes having acquired their virulence in the nasal fossæ invade later, by simple propagation, the tracheo-bronchial mucosa. There is nothing at the present time that indicates which view of this pathogency is the more correct. Certain it is, however, that bronchitis *a frigore* is generally preceded by a coryza and it is regarded from a clinical point of view, a descending bronchitis.

The article of Claisse (*Semaine Medicale*, 1893, p 397) adds to the above statement the notion of intoxications by microbe secretions. The presence of the microbe in the bronchi manifests itself by local effects on the tubes and by general toxic effects.

The local effects are expressive of the secretory reaction of the bronchial tree; this, in certain conditions, may lead to more or less extensive obliteration of the air passages and give extreme gravity to the prognosis. But the bronchial secretions may also have a marked toxic influence; this is a pathogenic factor that has been too much overlooked. The toxemia explains the general phenomena, the temperature, and to some extent, the dyspnea.

Claisse has made some interesting experments to determine the nature and quality of these toxines, and has worked out the bacteriological problem with considerable success; but the details of these researches may be considered later.

The Untoward Effects of Antipyrine, Acetanilide and Penacetine.—The recognition of the relationship subsisting between the chemical constitution of drug and its physiological action marks one of the greatest advances in therapeutics, and the application of principles established by the labors of Lauder Brunton, Fraser and others has led to the introduction of many remedies of undoubted value. Of the large number of synthetically prepared bodies that have attained such general notoriety as the three substances known as phenazone (antipyrine), acetanilide (antifeb-

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rine) and phenacetine. We are ever on the look out for means to lessen the sum of human suffering,and the rapid and extensive use of these remedies proves that they have at least engaged the good opinion of the public.

In this country the rapidity with which antipyrine has risen in favor is phenomenal, though we have not reached the point I once saw attained in a Continental hospital where more than half the prescirptions consisted of that drug. This affords matter for some reflection, and perhaps it was fitting that the Therapeutic Committee of the British Medical Association should select this subject to give Prof. Gairdner's ideas practical effect.

ANTIPYRINE.—Antipyrine acts upon the nervous system, and its administration is usually directed to either of the two main therapeutical indications of that action, namely the reduction of temperature or the relief of pain. For the former it is largely used in all kinds of fever, specific and others, and there is a tendency to give it freqnently in enteric fever, pneumonia and phtisis. The amount given for this purpose averaged, as stated in reports to the Association concerning ill effects following the use of antipyrine, antifebrine and phenacetine, from ten to twenty grains, perhaps repeated at short intervals for one or two doses. Kept within these limits, there was on the whole a freedom from ill effects, except in one or two instances attended by special circumstances. It is as an analgesic that the drug is prescribed so largely by practitioners and valued so much by the general public, and all are agreed that it is an invaluable remedy. For sick headache, neuralgia and spasmodic dysmenorrhea its use is attended with such great and striking success as to make it in this respect alone one of the most welcome of the recent additions to therapeutics. In this connection doses of five to ten or fifteen grains are generally given, sometimes repeated every three or four hours.

Large doses depress the nervous system. Of the twenty-five reports, seventeen note positive results varying from an unpleasant diaphoresis to severe collapse Most of them may be referred to the action on the nervous system, producing exhaustion and collapse following the fall of temperature; and there may be disturbance of the circulation for the same reason or secondarily from the effect on the blood corpuscles and the production of methemoglobinemia. Other symptoms, such as affections of the skin and pronounced psychical disturbsnce, are more rare. Depression with collapse has usually been noticed after doses given with a view to reduce fever; thus, a dose of twenty grains was followed in a male adult in a short time by great collapse and fall of temperature, requiring hypodermic injections of ether and digitalis to tide the patient over the difficulty; and particulars are given of a case where half that amount(ten grains) in a lady convalescent from influenza, led to extreme depression and collapse, the patient becoming deeply cyanosed,unconscious,and pulseless,and requiring free stimulation before she was considered out of danger twelve hours later. A small proportion of results such as these have been observed in children, where regulation of the dose is not so exactly carried out, although the amount borne by a child is often relatively much larger. Several of the reports call attention to the frequency of depression in pneumonia, and express the opinion that the use of the drug should be very guarded in that disease, one member holding that it is positively harmful even in small amounts, It may be mentioned that in Falk's excellent resume of the ill effects of the recently introduced antipyretics there is recorded a case of pneumonia where death occurred one hour after the administration of antipyrine, which was regarded as the cause of the fatal result. The stage of collapse is not infrequently ushered in by a feeling of anxiety and great prostration, and the symptoms are sometimes relieved by vomiting. The intensity of the depression that may be seen after even a moderate quantity of antipyrine is illustrated by a case recorded by the late Paul Guttmann, which was sent into hospital last autumn as one of cholera. The patient, a well-developed man, had the symptoms and appearance of the asphyxial stage of cholera morbus, except that the bowels were confined. On the chest and abdomen was a dull red miliary rash. It was ascertained that, for five days previous to his admission, he had taken for headache a fifteen-grain powder of antipyrine twice a day, consuming in all 150 grains, when he fell into this remarkable condition. Under stimulating treatment he recovered rapidly. Minor degrees of depression are represented by unpleasant diaphoresis, which may be so profuse as to prostrate the patient temporarily. One member, a practitioner of great experience, notes that "a few patients to whom it has been given for nervous forms of headache have complained of a feeling of greater depression after recovery from the attack than when antipyrine has not been given." Continued use of even small doses not infrequently leads to a condition in which the patient complains of having lost his energy, is disinclined to exert himself, and becomes depressed mentally; in short, there is established an antipyrine-habit. It varies in degree in individuals according to various circumstances, and it may be so marked that, as I once heard a very intelligent patient say, "the relief of pain is more than counterbalanced by the irritating feeling of uselessness antipyrine after a time induces." It may even go further, and instand of the expected relief bring on headache and general malaise. This is borne out by the experience of a member who has used the drug largely in hospital and private practice. He reports a case where antipyrine was ordered for migraine and vertigo in a male adult with relief at first; the patient got into the habit of taking tabloids at any time up to forty or fifty grains a day, and the result was his orginal troubles came back tenfold. There was complete relief when the habit was discovered and stopped. Falk mentions headache, giddiness, and other nervous symptoms, as occasionally brought on by antipyrine. One of our members reports blurring of the vision and

giddiness, along with blueness of the lips and finger nails. In Guttman's case, already mentioned, the vision was affected early, and to such an extent that the patient was treated for amaurosis, supposed to be of syphilitic origin, at an ophthalmic hospital. Blueness of the lips and face is one of the commonest untoward effects, and was noticed in various degrees, from that which is just perceptible to a deep cyanosis associated with profound collapse. It is to be explained by the action on the nervous system, and especially the blood, by which methemoglobinemia is produced. In extreme doses the red cells are destroyed. The circulation of the altered blood through the medullary centers is responsible for many of the symptoms observed. Several of the reports note cardiac depression, one recording palpitation, with numbness and tingling of the left arm and hand as slighter effects. The frequency of cardiac failure in cases of pneumonia, even with doses of ten grains, has already been remarked on. Apparently none of our members have had any experience of the occurrence of hemorrhages reported by continental writers. That such an event takes place points to the necessity of great caution in the administration of antipyrine in phthisis and typhoid fever. In the former the profuse perspiration produced by the drug is a serious drawback. The effect on the skin has received much attention in the medical journals, though in this country less than elsewhere. Two of the reports mention the appearance of a rash. The following details are given by a member of large experience. A single lady, thirty-six years of age, active and vigorous, and free from all manifestations of hysteria, but the subject of spasmodic dysmenorrhea, suffered likewise from severe nervous headache. For both conditions she had for many months used antipyrine under advice, with marked benefit, especially as regards headache, and without drawback until on one occasion, having taken a fairly full dose for dysmenorrhea, she was attacked over the whole trunk and larger limbs with an urticarious rash, which gradually sudsided in two or three days. This recurred on two subsequent occasions, though less severely after smaller doses, since which she utterly refuses to try it again. The rash was very depressing. Knorr's preparation was always used. This case accords with the experience of Dr. Prince Morrow, who, in speaking of the eruption, says, "ordinarily it is provoked by a continuous course of antipyrine treatment for several days, although in a large number of cases experimented on the symptoms did not occur in the exact period during which the largest quantity of the drug was taken. It begins to subside promptly on the disuse of the drug, and generally, but not always, recurs when the drug is again administered." Another instance noted was that of an erythematous rash in small circular patches not unlike measles; it appeared over the front of the chest and abdomen in a male adult after two medium doses, and gradually faded in a few days. Sometimes the patches are more marked and larger, as in a recent case published by Eichhorst. Of the bullous and scarlatiniform rashes and local edema described, there is no mention in any of the reports.

This completes the enumeration of the ill effects which find a place in the records of this inquiry. Various symptoms noticed by others, such as convulsions, rise of temperature instead of the anticipated fall, etc., have not been observed. Other minor effects have been met with by many of the members, I have since learned, but they are not detailed in the reports, as the importance attributed to them was trifling.

As to the frequency with which these ill effects are met, all the members agree that they are very rare. Shortly after the introduction of the drug their appearance was not uncommon, due, no doubt, to the large doses then in use. Now that later experience has indicated the limit of safe administration, both ill effects and unpleasant consequence are marked by their absence, and many of the cases recorded may be explained on the ground of idiosyncrasy. Accordingly, as might be expected, their comparative importance is very insignificant, and the question—do they materially limit the usefulness of the drug?—receives a negative answer. Some of the members take the opportunity of protesting against allowing the general public to take these remedies into their own hands. No one who has come across an instance of the antipyrine habit will question the desirability of using with the utmost caution, and under proper supervision, a drug that has so definite an action on the nervons system; and it would be well if the profession at large embodie its opinion in a form which would readily reach the public. If we turn to the reports of those who have not observed any unpleasant after effect or signs of intoxication, we find that the doses which those members are in the habit of giving are, on the whole, smaller. A single dose of ten grains, or five grains every three hours, is the usual practice of three out of the eight who report negative results; others give two ten-grain doses with an interval of two or three hours between. Two members state that when giving antipyrine as an antipyretic; they always combine it with a stimulant, such as sal volatile, brandy, or tincture of digitalis. In this way large doses, even to the extent of twenty grains every four hours, until 120 grains had been reached, were administered without depression being left. It is a point of some importance to know to what extent a fall of temperature followed the ingestion of the large amount so administered. It is probable that, if the stimulant by its action on the nervous system prevented reduction of the temperture to any degree, there would be an absence of symptoms of depression and collapse. But even small amounts may provoke unplesant consequences, though these are confined to minor degrees of depression and effects on the skin. A case recorded by Short showed a rash and localized edema, with much distress, after a five grain dose. This occurred on three different occasions, although the patient had taken the drug frequently before. The suggestion was thrown out that the difference might be explained by the circumstance that, before

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each attack, the drug was administered in a solid form not compeletely dissolved, whereas formerly it had always been taken in solution.

ACETANILIDE (*Antifebrine*).—Since its introduction in 1886 acetanilide has been chiefly used as an antipyretic, its power of relieving pain being uncertain. Its action in lowering temperature is striking, but the disadvantages attending it have seriously limited its administration. The frequent occurrence of symptoms of intoxication, and the alarming appearance they sometimes assume, led many practitioners to abandon its use very early, and we have not the same amount of experience to guide us that we have with antipyrine. Eight members report results after a considerable use of the drug, and among them a few speak of its great value when used with due care. The dose generally given varies between five and ten grains, but give as low as three grains to an adult. The expriences of every one seems to be that the larger doses are not exhibited long before symptoms of intoxication make an appearance. Here again some practitioners combine the drug with a stimulant, brandy, or digitalis, or caffeine, with excellent results. The intervals between the doses are greater than with antipyrine. The concensus of opinion gathered from the report coincides with that generally expressed, that symptoms of depression and collapse are more readily produced and are more marked than with the other drug; and this may be explained by a fall of temperature being greater and more rapid. Rebound of temperature is met with, not infrequently ushered in by shivering. One observer, whose extensive use of acetanilide makes his opinion very valuable, states there is less collapse in children than with antipyrine. In pneumonia the depressent action on the heart renders it very unsafe. Most of the reports mention cyanosis, and to a greater degree than after antipyrine. Anemia may be induced by the continued use of the drug, and become a grave condition. Some time ago I saw a lady who has been ordered five-grain tabloids of acetanilide on account of rise of temperature accomanying subacute rheumatism, two and some times four tabloids being taken daily. After a few weeks the patient exhibited marked pallor, with shortness of breath on slight exertion. On stopping the drug recovery from her original symptoms soon set in, but it was many months before she lost her bloodless appear ance The anemia is due to action of acetanilide on the red blood cells; minor forms of it are noticed after a few doses, and the comparatively early onset should be borne in mind in all cases.

PHENACETINE.—This substance, which has been used since 1887, was introduced as an antipyretic and analgesic; but it is almost entirely as the latter that it has established a reputation. It is more free from ill effects than either of the other two substances, as may be gathered from the fact that several reports note considerable experience of it without observing any symptom of intoxcation. It is generally given in doses varing from five to ten grains, and very useful in neuralgia of the fifth nerve, sick headache, etc. In phthisis one observer gives it as an atipyretic, and finds it act without increasing the night-sweats. Its depressant action on the nervous system and heart is manifest only when large doses are given, small amounts taken frequently being borne without ill effects. The drug has already engaged the good opinion of the general public, and for the relief of pain is much affected by individuals who consider they have "a weak heart." It is not, however, absolutely free from unpleasant consequences, as the publication of a recent case by Eisenhart shown. A patient, an adult male was given for pain in connection with a carious tooth, three powders, each containing fifteen grains of phenacetine, within three and a half hours; half an hour after the last powder, palpitation and oppression increased, the palpitation was greater, dullness of hearing came on, and then nausea and vomiting. With the onset of sickness, all traces of intoxication has vanished, and the patient felt well. Skin eruptions, chiefly urticarious, are said to be met with.—D. R. Paterson M.D., in *The Practitioner*.

The Action of Europhen upon the Tubercle Bacillus.—Dr. F. Christmann (*Centbl. f. Bakt. und Parasiten Kunde; Med. Prog.*) says:

Siebel in 1891 published his bacteriological investigations of europhen from which he concluded that this substance is at least as efficient as iodoform. He failed, however, to extend his experiments to the bacillus of human tuberculosis. Christmann has recently investigated the action of various substances upon tubercle bacilli and among them that of europhen.

For his expriments he employed pure cultures of this organism with exception of a small series of expriments with tuberculous sputa The europhen was either directly dusted on the cultures or placed in a short reagent glass and suspended in the hermetically closed culture glass or employed in the form of a concentrated solution in olive oil.

The animals for the experiments comprised exclusively Guinea pigs, since, according to Koch, these are more susceptible to tuberculous injection than rabbits, and for this reason it might be expected that they would react even on greatly attenuated bacilli. The inoculations with a few exceptions were made intra peritoneally, the punctures being always made in the posterior half of the abdomen on the left side. The cultures were derived partly from a Guinea pig inoculated with a piece of spleen from a tuberculous cow and partly from cultures furnished by Professor Metschnikoff, of Paris. All had been cultivated on glycerine-agar and showed a vigorons development. Their virulence of each of the cultures employed was tested on one each of the animals and after the last inoculation again tested with a parallel culture.

In the first series of experiments a culture seventy days old was dusted with europhen and placed in a thermostat at a temperature of 33°. Five Guinea pigs were

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inoculated. Inoculation with cultures subjected to the action of europhen for respectivly seven and fourteen days causad heath in ninety-three and 160 days; the autopsy in the first aminal revealing numerous bacilli, and in the second only a few scattered ones in the glands. The animal inoculated with cultures acted upon by europhen for twenty-one twenty-eight and thirty-seven days respectively, showed at the autopsy no sign of tubercle or bacili.

In the second series a culture 50days old was exposed to the action of the europhen as described above and four animals were inoculated after an exposure of thirteen, twenty-seven, thirty six and forty-four days respectively. The first of the four showed no signs of tuberculosis at the autopsy except three swelled mesentric glands, the others no tuberculous lesion of any kind.

In the third series a culture fifty nine days old was scraped off and rubbed together with a concentrated solution of europhen in olive oil and allowed to remain in the dark at the temperature of the room. Before the inoculation it was stirred with a gla-s rod and injected in quantity of 1 c. cm. The inoculations were made after an exposure of the culture to the action of europhen oil varying from four to twenty-five days. The animal inoculated with the culture exposed for four days was killed 163 days later, the others died after a period of form 163 to 165 days; all presented marked tuberculosis lesions.

Control expriments with pure cultures showed that no diminution of virulence had taken place after forty-four days, the aminals inoculated at that time dying at the end of ninety days, and presenting marked signs of tuberculosis so that the diminished virulence of the culture treated with europhen was not attributable to action of time.

In the forth series of expriments the influence of europhen upon tuberculosis sputa was tested by rolling the infected sputa in quantities of one half centimeter in the powder until it was completely covered. The sputa thus treated were placed in two hermetically closed glass jars the one specimen (a) being kept at the temperature of the room and the other (b) at 33°. The control Guinea pig died twenty-eight days after peritoneal inoculation with marked tuberculosis lesions. Three Guinea pigs were inoculated with material from specimen (a) after exposure of the action of europhen for a period of seventeen, thirty one and thirty-seven days respectively. Of these the first died in the forty-seven days with marked tuberculosis changes, the other two died in thirty-one and twenty-seven days respectively of enteritis no tuberculosis being present. Two animals were inoculated with sputa from specimen (b) after exposure to the action of europhen for twenty six and thirty-seven days respectively and presented no evidence of tubersulosis three or four weeks later.

In Christmann's opinion these results demonstrated that europhen exerts a powerful germicidal action in all cases where the conditions were favorable to its decomposition, that is the separation of iodine. This occurs not only when europhen is in direct contact with an aqueous substratum (as in series one and four), but also if it is present in an atmosphere surcharged with aqueous vapor although not in dirct contact with the culture (series three), that in the latter case a considerable quantity of iodine is liberated, is clearly demonstrated by the following expriment:

A test tube is filled to a height of about 3 cm. with water, and without boiling sufficient starch is added that an undissolved residue settles at the bottom. Into this tube a smaller one half filled with europhen is placed, after which the larger receptacle is hermetically closed. If this is put in a thermostat there is observed at an early period a blue ring around the starch. It is possible, however, that in a case of "dry culture" the action would have have been correspondingly feeble.

It is entirely different with europhen oil. Notwithstanding the high percentage of europhen in the solution while it could be positively demonstrated that a a diminution of the virulence of the culture had accurred at the end of four days, this did not become more marked, but remained stationary; the injection of bacilli subjected for twenty-five days to the action of europhen therefore, produced almost the same lesion as those made at an earlier period.

This solution of europhen in oil is characterized by its stability. According to Goldmann, "when shaken with water it gives off a soluble combination of iodine."

This latter fact, in Christmann's opinion, explains the physiological action of the solution. He believes that in consequence of the moisture adhering to the bacilli a certain amount of iodine is set free from the solution; this decomposition, however, will be confined within very narrow time limits proportional to the quantity of water present, and for this reason the action of the iodine must be rapidly exhausted. After this has occurred europhen oil will act as an indifferent fluid.

According to the author the effect of europhen is due to the iodine set free while iodoform exerts a specific action. Troje and Tangl have found that iodoform dissolved in olive oil destroys tubercle bacilli in three days; in the dry state (rubbed together with the cultures), in some instances in fourteen days, but positively in three weeks; in form of vapor not even after a month, but usually after fifty days. If iodoform was sprinkled on the culture the bacilli produced a cold abscess even after sixteen days' action. On the other hand, the above experiments showed that europhen dissolved in olive oil has no marked effect even at the end of twenty five days, but when dusted on the cultures it destroys the tubercle bacilli sometimes in fourteen days, but positively in twenty-one days; and in the vaporous state in twenty-seven days, while in the latter case it considerably arrests their growth in thirteen days.

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NOTES AND ITEMS

Bryce's Pocket Practice. A Complete and Condensed work on the Practice of Medicine for Physicians and Students. By Clarence E. Bryce, M.D., Author of Bryce's Visiting List," Author of "The Phy sician's Companion," Editor of the *Southern Clinic*, and Editor of the *American Doctor*, Member of the American Medical Press Association. Copyrighted, 1892. All rights reserved. Richmond, Va: The *Southern Clinic*. 1892. St. Louis: J. H. Chambers & Co, 914 Locust Street. Price, 75 cents.

This little book is a *multum in parvo* work in the truest sense of the word. It possesses many features that should commend it to physicians. The fact that it is written by a well-known medical editor is sufficient guarantee of its merits.—Nashville *Medical and Surgical Journal.*

How can it be Accomplished?—It is not only feasible but possible that the American Medical Association should in the near future be the grand central organization of the medical profession of the United States, and yield an influence that only a central body can, even as much as the British Medical Association does in Great Britian.

There are too many societies under big sounding titles, which ought to be consolidated under some of the various sections of the American Medical Association. We can not and do not believe that the medical profes sion, as a mass, want a half dozen national societies, for by so doing, all lose influence and power, not only in the profession but out of it. It seems to us that the members of the American Medical Association are not active enough in doing missionary work in this direction among the members of the profession outside of this Association's limits. If an earnest effort were made in this direction we feel confident that a different feeling would be created, and a wider sphere of usefulness would be opened to the only real national medical association of the United States. —New England *Med. Month.*

Spelling Made Hideous.—The *Medical Press and Circular* prints the following Philistine editorial: "Many of the American medical journals are now becoming so hideous in the matter of spelling that it is a difficult matter even for an ordinary educated English medical man to read them without wishing to throw up his task in disgust. The van in this insane effort to appear novel is led by the Philadelphia *Medical News*, and now we learn that the editor of that journal is bringing out a new edition of a 'Medical Dictionary of Terms,' in which all this ne-fangled and absurd method of spell ing will be incorporated. The rising generation of young American medicos are to be pitied if they are required to adopt the teaching in orthography which will obtain in this 'Dictionary.' We are glad to see that some of our leading contemporaries in the United States have not been led into disfiguring their columns by such words as 'chemic,' 'bromid,' and 'physiologic,' together with others equally absurd and hideous. The introducer of this *fin de siecle* method of spelling affirms that no argument can be advanced against it. But what about the rules of grammar and prosody so far as the English language is concerned. Perhaps under the circumstances it would be best at once to bring out a book dealing with the subject of 'The American Language: its Grammar and Orthography,' and then there would be no difficulty in showing that the American method of spelling had nothing to do with the English lan guage."—*Medical Record.*

Football Mortalities.—Already five deaths have been reported this fall from accidents while playing football, one each from New Jersey, Indiana, Ohio, Wisconsin, and Connecticut. The two last were caused by fracture or dislocation of a cervical vertebra and crushing of the spinal cord. One of them occurred near Farmington, Conn. The second took place during a game between the elevens of the Toledo (O.) High School and the Adrian (Mich) College, which was played at Adrian recently. A Toledo player, Carew, says the report, "had the ball, and downed to save it. Three Toledo boys dropped to save him, and in an instant the Adrian team was upon them. When the strug gle was over, Carew remained motionless upon the ground. The crowd cried, 'Fake!' but it was soon discovered that the young man's neck was dislocated." Upon examination it was found that this body was paralyzed from the chest down, and his spinal column injured, and he died the next morning without having recovered consciousness. Another member of the Toledo team was kicked in the groin, and injured so badly that he could not return to his home. A third player suffered serious injury to his right leg. English newspapers just received mention the death of a football player in West Hartlepool, "from the effect of injuries received in a football match, when he was kicked severely in the stomach."

English medical journals every year report a long list of deaths and causalties from football; but up to this year no fatal accident, so far as we know, has been reported in the United States. A mortality of five with the football season not over, however, is most startling. The general results of football playing have been heretofore considered so good as to outweigh some of the disadvantages. But the question now arises whether half a dozsn deaths and hundreds of serious accidents are not too great a penalty to pay for this sport.

The football games that occur in the city of New York have degenerated into great professional shows which are made the excuse for unlimited betting, and which end in vulgar carousals. It is quite time for college authorities to interfere.—*Medical Record.*

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Fearful Cholera Mortality Among Pilgrims. — "During May last over 6,000 pilgrims left Tunis for Mecca and about 3,000 more sailed from the other ports on the coast (Calcutta *Med. Report.*). It is estimated that of these, 4,500 persons perished on their way to or from the Holy City. The steamers bringing those back who had made the *Haj* arrived here about ten days ago. The pilgrims were landed on the quarantine island of Zambia, in the Gulf of Tunis, and, after medical inspection and disinfection, were allowed to come on shore at Tunis. At about three o'clock in the afternoon of the day when they were expected, the different Tunisian sects with the friends and relations of the returning pilgrims in number about 12,000, marched down to the quays, carrying banners and singing hymns. At length the pilgrims landed, and it was then learned, for the first time, that scarcely 2,000 of all who had started from Tunis had come back. Heart-rending cries of wailing and lamentation arose from the vast throng of women of whom some were carried away fainting, while others threw themselves on their knees and supplicated the Prophet with frenzied fervour to restore to them the lost. The pilgrims themselves, as soon as they set foot ashore, and before they sought their relatives turned their faces towards Mecca, and prostating themselves, offered thanks to Mahomed for their salvation. The pilgrims tell a terrible tale of their experience. On June 24th, two days before the *Courban Bairam*, upwards of 100,000 Mussulmans—Arabs, Turks, and Indians, had gathered on the Sacred Mount to hear the solemn address which is delivered to those who wish to become *Haj*. Many of these people were in the most wretched condition, and some had not even a loaf of bread. The following day the onward movement to the Holy City began. Those who got away were fortunate. The Mount was like a battle-field, strewn with dead and dying. Cholera had decimated the great concourse of pilgrims. So frightfully did the pestilence rage that it was impossible for any living creature to approach the place. At length a battalion of Turkish troops was sent from Soana to bury the dead and remove any people who still lived. The battalion, when it reached the Mount, was 700 strong. After the work had been done 200 men only remained to go back to the coast. Five hundred of the soldiers had died of cholera."

University of Georgia.—The Medical Department of the University of Georgia is against the abolishment of the Board of Medical Examiners by the State Legislature, and makes an earnest appeal that it be re established. The professors of the Medical College adopted the following resolutions:

WHEREAS, It is an indisputable fact that since the Board of Medical Examiners of Georgia was abolished by act of the Legislature, Georgia has been a veritable paradise for quacks who have been driven out of other States.

Resolved, That the Faculty of the Medical Department of the University of Georgia heartily indorses the principal features of the bill as printed in the Atlanta *Med. and Surg. Journ.*, December, 1898, pages 612, 613 and 614, captioned, "A Bill to Be Entitled an Act to Establish a Board of Medical Examiners for the State of Georgia, and to Protect the people from Illegal and Unqualified Practitioners of Medicine," which bill was passed by the Senate of Georgia at its last session.

Resolved, That a committee of three members of this Faculty be appointed and charged with the duty of appearing befor the Legislature of Georgia and using all honorable means to secure the enactment of said bill.

Resolved. That this Faculty, through the said committee, requests the Senator from this Senatorial district, and the Representatives of the Lower House from this county, to exert themselves to secure the passage of said bill.

Resolved, That this College points with pride to the fact that it was the first medical school in America to insist upon the necessity of higher medical education in the colleges of the United States. This fact is shown first, by the record that in 1825 the first Board of State Medical Examiners was organized at the request of the Board of Trustees of this College; second, in the early history of this College the term was 5 months. In 1845 the Faculty of this College attempted to have all medical colleges in America require of their students attendance on two full courses of six months each as a requisite to graduation. This Medical School only receded from its then advanced position, because forced to do so by refusal of all other colleges to join in the movement, no other college having expressed a willingness to join in the crusade against the disgraceful practice of yearly graduating large numbers of ignorant and unqualified medical students.

Resolved, That it is, in the opinion of this Faculty, a blot upon the escutcheon of the State, to permit Georgia to be without a Board of Medical Examiners to protect her citizens against medical pretenders.

Native Opium in China —An extremely interesting section of the last British consular report from Wenchow is devoted to native opium. It appears that in the province of Chekiang opium was first manufactured in the prefecture of Tai chow, lying between Wenchow and Ningpo, whence the still common name of Tai-chow "paste." The poppy next began to be grown for opium in other prefectures as well, Wenchow among them; but for a considerable time it was customary to hire Tai-chow men to collect and prepare the juice. Their monopoly of opium harvesting sent up their wages and checked cultivation until such time as Wenchow hands learnt the secret. Nowadays the services of Tai-chow men are not required, but Tai chow opium keeps its old pre eminence. In 1879, owing to the appalling famine in Shansi, the Pekin Government vigorously interdicted the cultivation of opium, on the ground that it interfered with the growth of foodstuffs.

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Farmers were afraid to run the risk of confiscation of their lands, the penalty of disobedience, and for the next few years the production of native opium was very slight. Gradually the officials whose proclamations had caused the panic were transferred to other posts, and the farmers, seeing that no new prohibitions were issued, took heart, and resumed more and more eagerly the cultivation of the poppy. Each year the amount produced increased, until in 1887 the supply became greater than the demand, and growers lost. Prices of native opium vary according as it is old or new, pure or adulterated. The "new" opium of this season when first put on the market sold at £42 10s. per picul of 133 1-3 lb. The dealers have hitherto been nearly all Fukien men. They purchase the crude opium in quantities however small, and boil it down there and then. The opium thus prepared is made up into balls of the weight of Patna (4 lbs. each), or is stored in casks holding about 66 lbs. each. It finds its sale chiefly in Fukien province, but a certain quantity is carried over to Formosa. Large quantities pay native duty, or likin, or both, but small quantities are easily smuggled. The likin authorities of Chekiang, observing that a great deal passed the frontier on which no duty was paid, established special opium likin offices, but they are not very effective as a hindrance to smuggling. The difficulties in the way of opium growing are enumerated thus: (1) The fields require twice the manure needed for dry grains or cotton; (2) wet and stormy weather when the heads are forming causes the capsules to droop and the roots to rot; (3) the juice must be collected the moment it is ready, yet it cannot be gathered in blazing sunshine or during storms; dull days, or days when a light rain is falling, are good, and best of all are moonlight nights; (4) laborers engaged to collect the juice require to be paid even if the weather prevents their employment. The method of collecting the juice in Wenchow is for one man to slice with a downward stroke the skin of each capsule, while several other men go around with bamboo scoops to scrape off the juice that thereupon exudes. No capsule is sliced twice on the same day, and the largest capsule will only bear six slicings. Moreover, the juice of the first two slicings is far better than that of the later ones, in fact, the wealthier farmers put aside the juice so collected, and, after drying it several days in the sun, store it away in the shells of goose eggs in some dark place for three years. It is said to be then superior to any Indian drug. Native opium, in any case, should never be used in its first year; at the very least a summer should be allowed to pass. The best land for poppy-growing is the slightly brackish, but even that is only good for two years. A mow (say 800 square yards) will yield upwards of 4 lbs. avoirdupois of juice if well manured and if the plants are carefully thinned out. A medium crop is 2 lbs. to 3 lbs., where the capsules have only taken four slicings. But it will sometimes happen that in spite of all care and on the best land the capsules yield no opium.—*Times.*

Gangrene.

℞ Sennine, - - - - - - - - - - ℥ij.
Sig. Use as a dusting powder.

Headache.

℞ Salo-Sedatus, - - - - - tablets 5 grs. each.
Sig. Two tablets every three to six hours.

Spermatorrhea With Sexual Weakness.

℞ Elixir Nutrans (A. W. & Co.), - - - - fℨvj.
Tinct. strychni., - - - - - - - - ♈j.
M.
Sig. Teaspoonful four times a day.

Valuable Nerve Tonic.

℞ Citrate of iron, - - - - - - - - - ♈j.
Tinct. strychni., - - - - - - - - fℨj.
Golden's Liquid Beef Tonic, - - - - fℨvj.
M.
Sig. Teaspoonful three times a day.

Synovitis.

℞ Ungt. hydrarg. cincr.,
Ungt. belladonnæ, - - - - - - aa ℥j.
Tinct. iodi, - - - - - - - - - fℨj.
M. F. ungi.
Sig. For inunction twice a day.

Infantile Eczema.

℞ Sennine,
Hydrarg. chlorat. mite, - - - - - aa ♈j.
Zinc. oxydat. pulv., - - - - - - - ℥ij.
Vaselin, - - - - - - - - - - ℥j.
M. F. ungt.
Sig. Apply locally twice a day.

Hematuria.

℞ Tinct. ferri chlor., - - - - - - - ℥ij.
Tinct. digitalis, - - - - - - - - ℥j.
Tinct. opii, - - - - - - - - - ℥ss.
Fl. extr. ergot, - - - - - - - - ℥j.
Aq. destillat.,
Syr. menth. pip., - - - - - aa fℨij.
M.
Sig. Teaspoonful every four hours.

Bronchitis in Children.

℞ Ammon. carbonic, - - - - - - - ♈j.
Neurosine, - - - - - - - - - fℨss.
Syrup. tolu.,
Syrup senegæ, - - - - - - - aa ℥ij.
M.
Sig. Teaspoonful every two hours.

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Enlarged Lymphatic Glands.

℞ Phillip's Cod Liver Oil Emulsion, - one bottle.

Gouty Insomnia.

℞ Robinson's Elixir Paraldehyd, - - - ℥iv.
Sig. Two teaspoonfuls repeated as necessary.

General Tonic for Females.

℞ Syr. Hypophosph. Comp. (Fellow's),
Dioviburnia, - - - - - - - aa ℥iij.
M.
Sig. Two teaspoonfuls half an hour before meals.

Intestinal Tenesmus. (Colic).

℞ Tinct. valerian, - - - - - - - ℥ss.
Tinct. opii, - - - - - - - - ℥j.
Dioviburnia, - - - - - - - ℥iv.
M.
Sig. Tablespoonful as required.

Delirium Tremens.

℞ Fl. ext. digitalis, - - - - - - - ℥j.
Chloral hydrat., - - - - - - - - ʒij.
Neurosine, - - - - - - - - ℥i.
M.
Sig. Tablespoonful repeated as necessary.

Perspiration of the Feet.

℞ Acid. tannic,
Sennine, - - - - - - - - aa ʒj.
Talc. pulv., - - - - - - - - ʒij.
M.
Sig. To be dusted upon the perspiring parts.

Laryngismus Stridulus.

℞ Neurosine, - - - - - - - - ℥j.
Chloral hydrat, - - - - - - - - ʒij.
Syrup simpl., - - - - - - ℥iij.
M.
Sig. Teaspoonful every half hour or hours as required.

Neuralgia.

℞ Phenacetine, - - - - - - - - ʒss.
Sach. alb., - - - - - - - - - ʒj.
M. F. pulv. Divide in dos. No. 10.
Sig. One powder four times a day.

℞ Antikamnia, - - - - - - - - ʒj.
Codein. sulph., - - - - - - - gr.ij.
Strychn. sul h., - - - - - - gr.1/10.
Acid. arnenicos, - - - - - - - gr.1/8.
Extr. aconiti, - - - - - - - - gr.j.
No. 10.
Sig. One pill every hour until relieved.

Otorrhea and Otitis

℞ Marchand's Peroxide of Hydrogen,
Aq. destillat., - - - - - - - aa ℥ij.
M.
Sig. Syringe the ear carefully and when cleansed drop in a few drops of the following solution:

℞ Sennine, - - - - - - - - - ʒj.
Aq. rosæ,
Glycerin, - - - - - - - aa ℥ss.
M.
Sig. Externally.

Wheeler's Tissue Phosphates is the name of an excellent preparation which is a real builder of the tissues. Since it was first made by Mr. T. B. Wheeler it has undergone ample trials and the results achieved by it have given universal satisfaction.

BRODNAX LA., Dec. 11, 1893.
DIOS CHEMICAL CO., ST. LOUIS, MO.—
GENTLEMEN—I received the sample of Sennine which you so kindly sent me. I am rather averse to trying new remedies, where the old ones I have used do me such good service. But having an amputation of the arm, which was not healing under treatment as I wished it, I tried Sennine, dusting it on cotton and wound, and applying. I made to day the third dressing, and find that the wound is entirely healed. This is the result of six days, while under boracic acid and iodoform for three weeks the results were so discouraging that I was thinking of trying the pure carbolic acid injected into the open suppurating wound. It is hardly necessary for me to add that I am more than pleased with Sennine as a dry dressing and shall keep it on hand in future.
DR. BEN. H. BRADNAX.

"Weekly Medical Review" Pocket Reference Book and Visiting List. Perpetual. [St. Louis: J. H. Chambers & Co., 914 Locust Street. Price, 75 cents, postpaid.

This Visiting List is among the best which have been issued and is remarkably compact and yet is replete with information and contains not only sufficient space to record visits for one year but all the usual blank leaves for memoranda referring to vaccinations, obstetric engagements, death record, etc. There are, furthermore, a number of blanks provided for miscellaneous memoranda. The whole is neatly bound in tucks and will recommend itself to the physician, at sight. The price is certainly exceedingly low. —*N. O. Medical and Surgical Journal.*

Complications of Uterine Troubles.—Dr. L. M. Bickmore, of Dayton, Ohio, writes as follows to the Dios Chemical Co., St. Louis, Mo.: "I have given Dioviburnia a thorough trial and cheerfully say the result has been very satisfactory. It is just what I want to assist me in the cure of the various forms and complications of uterine troubles. (I am of the strictest sect a 'regular,' and do not advertise as a specialist. But of late years have devoted almost my entire practice to the treatment of female diseases). I am pleased to say that I have found Dioviburnia a very valuable medicine."

W. L. Gahagan, M.D., Coronor of Hamilton County, Chattanooga, writes: "I must say that Neurosine has given better results and more universal satisfaction than any combination ever used by me. Have tried it in many nervous affections. In some it is a specific, in others a therapeutic agent of great value."

Voluntary Testimonials from such eminent physicians as Paul F. Munde, J. Lewis Smith, Thos. E. Satterthwaite, Graeme M. Hammond, George B. Fowler, Stephen Smith Burt, A. Jacobi, Mary Putnam Jacobi, B. Sachs, and scores of others, who are using Rudisch's Beef Peptome (Sarco Peptones) in their private and hospital practice, should certainly convince the most sceptical practitioner of its unequaled value as a food for invalids, and patients with faulty or impaired digestion. Its palatability, its rapid assimilability and the fact that it contains all the nutritive elements of the best lean beef insure its superiority over all other forms of Beef. Physicians are requested to write to the Rudisch Co., Sole Manufacturers, 317 Greenwich St., New York, for free samples, pamphlets, testimonials, etc. Mention this journal.

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MEDICAL REVIEW.

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ORIGINAL ARTICLES

Injuries to the Cranial Vault.

BY EMORY LANPHEAR, M.D., PH.D., KANSAS CITY, MO,

Professor of Operative Surgery and Clinical Surgery in the Kansas City Medical College.

Read before the Southwestern Railway Surgeons' Association.

The more skulls I open, the more I am inclined to believe the assertion of Agnew that even simple fissure of the vault ought to be treated by trephining. In the *University Medical Magazine*, October, 1891, in discussing the subject of traumatic epilepsy, he says: "It is not saying too much to assume that surgery is responsible for the great majority of traumatic epilepsies. The old members of our profession cannot, of course, be held responsible for not practicing those methods which time, observation, vivisection and knowledge derived from collateral branches of study have made possible. They said that human life is too precious a thing to be jeopardized by overstepping the bounds of a wise conservatism. On the other hand no charity can release him from responsibility, who, from being wedded to old traditions and who can discover nothing valuable outside of his own narrow horizon, declines to keep step in the grand procession. The doctrine that depressed fractures of the skull without symptoms require no operative interference, a doctrine which in the past has been so deeply rooted in the professional mind, I hold to be responsible for very many of the unfortunate sequels of head injuries. However small may be the depression which follows a fracture of the cranium, save in one or two localities, it will encroach enough upon the dural nerves to cause more or less irritation, which, though insignificant at first and not at all recognizable to the consciousness of the patient, yet eventually will be propagated to the cortex and brain ganglia until finally the paroxysmal explosion occurs. * * * Whenever, therefore, in my judgment, the profession can accept the doctrine that *all depressed fractures of the cranium, however slight may be the depression, and entirely irrespective of pressure symptoms, are proper subjects for trephining*, then will traumatic epilepsy largely disappear; indeed, it is not improbable, in view of the greatly diminished risk from trephining, *that the operation will be extended even to cases of simple fracture or fissure of the skull.*"

The reason assigned by Dr. Agnew is that no surgeon, however skilled, can determine without operation what has happened inside of the skull, even in a simple fracture; therefore the necessity for inspection of the interior as well as exterior surface; which is in conformity with the statement of Bouillaud that no blow upon the head, however insignificant it may appear to be, is too slight to excite anxiety regarding the future.

I think that any surgeon who has had much experience in the treatment of injuries of the head will agree with the proposition that every wound of the scalp should be inspected carefully, every cut enlarged to determine the extent of the injury in the subaponeurotic layer and to decide whether or not fracture exists; indeed I go farther than this and assert that in every case where there has been an injury to the head and unconsciousness persists for more than two hours the surgeon should shave the scalp and make an exploratory operation, even opening the skull over the meningeal arteries on both sides, if no fracture of the vault is detected and the symptoms do not point unmistakably to fracture of the base. The old objection to converting a simple fracture into a compound one by opening the scalp does not hold good in these days of asepsis and antisepsis; and the rule which many surgeons have followed: to reject trephining until symptoms demand it—is incorrect and should not now be adopted. In every compound fracture; in every punctured fracture and in every depressed fracture the rule should be to operate. The objects in trephining are:

1. Removal of fragments.
2. Elevation of depression.
3. Reparation of injured structures.
4. Prevention of septic inflammation.
5. Exploration.

Concerning the necessity for enlarging the opening in what appears to be a simple, incised wound of the scalp it may be said that frequently the scalp will be found to have slipped and covered a fracture of serious import, even of considerable depression if there be a clot just outside the site of fracture, as I have found in several cases.

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The treatment must, of necessity, vary according to the character of the fracture. In localized injury it is sometimes necessary to shave only in the immediate vicinity, but in more extensive ones (and *always* in compound fractures) the whole scalp should be shaved and thoroughly cleaned. The method of cleaning the scalp which was first put into practice by myself is a somewhat complicated one and difficult to follow, but my results in brain surgery have been so satisfactory since its adoption that I feel like asking others to follow the same plan; which consists of the application to the head of the same rules as those for cleaning the hands which were introduced by the workers in Johns Hopkins Hospital. The shaved scalp is thoroughly scrubbed with soap and water, with a stiff brush, dried and washed with ether; in many cases one is compelled to stop at this point, simply finishing the preparation by the application of a solution of bichloride of mercury, 1 to 1000; but whenever possible the farther steps should be pursued, viz., applying a saturated solution of potassium permanganate until the scalp is a deep mahogony color, then decolorizing with a strong solution of axalic acid, and finally rinsing with bichloride solution. At this point all germicides must disappear from the operation if the brain is to be exposed as *no antiseptic solution can be safely used inside the cranium;* and if the surgeon has been successful in securing a surgically clean field of operation, has properly prepared his instruments by boiling and has cleaned his hands by scrubbing and immersion in the permanganic, oxalic and mercuric solutions in the order named there will be no necessity for their use. When cleaned the head is enveloped in sterilized towels saturated with hot water, the operating table covered similarly and the preparation is complete. In operating outside of a hospital I find it best to boil a number of towels at the time of preparation so as to be sure they are properly sterilized.

Everything being in readiness the part of the scalp to be opened should be surrounded by a strong silk suture, introduced by a half-curve Hagedorn needle, commencing at the margin of the scalp and running backward over the superior longitudinal sinus to near the occipital protuberance (or less if a small area is to be uncovered) then downward toward the mastoid and forward above the ear to within an inch and a half of the point of beginning. The mode of introducing this hemostatic suture is this: a stitch of an inch or less is taken down to the pericranium, and tied tightly enough to cause some wrinkling of the skin; a second stitch is then taken and the thread brought back under the first and snugly tightened; a third taken and brought back under the second, and so on. This "back stitch" suture must be drawn tightly at each stitch so as to blanch the scalp to quite a little distance, the thread being held taut by an assistant while each additional stitch is being taken. By the introduction of this encircling suture one may save much valuable time and prevent bleeding that might prove fatal.

The crucial incision in the scalp advocated by most authors should rarely be adopted—it necessitates four hands to hold back the flap and predispose to the formation of hernia cerebri. A flap shaped like a horse-shoe is always preferable to any other. The cut should be made at one sweep of the knife, and through the periosteum as well as scalp. The incision will be followed by a gush of blood (from the flap) which need not attract the attention of the operator. The scalp and pericranium should be quickly raised by aid of the handle of the scalpel where there are adhesions as at the cranial sutures; as soon as turned back it must be enveloped in a piece of gauze wrung from hot water; by which time all bleeding will usually have ceased—but if persistent, as at the severed temporal artery, spurting vessels are to be caught in hemostatic forceps.

When the scalp has been turned back and it is found that there is nothing but a simple fissure and no symptoms are present to urge the surgeon to open the skull, he should simply wash the fissure carefully with bichloride solution, chiseling away the outer table so as to secure perfect cleaning if there be any indication of dirt in the line of fracture. When the wound is cleaned the surrounding suture is to be removed, bleeding checked and the scalp sewed with silk-worm gut sutures with a bundle of catgut in the lower angle of the wound for drainage. Plenty of iodoform, boric acid or subiodide of bismuth should be dusted on for drying purposes and much bichloride gauze applied.

Frequently, however, there is depression. The old rule was to elevate, if possible, by a periosteal elevator, without exposing the dura. This is pernicious practice as in every depressed fracture the skull should be opened and the dura inspected.

There are three ways of opening the skull:

1. With the chisel and hammer.
2. With the gouge.
3. With the trephine.

The use of the chisel has been attended by fatal results; under even the most careful operators the pulse rapidly weakens as the blows of the mallet increase in number and I have seen operations stopped because a condition of collapse supervened immediately after the first few taps. If employed at all the chisel should be used only on adults and in making an opening where the skull is thin—as in trephining the frontal sinus and the mastoid. The cutting must be done with the corner of the chisel and by a succession of gentle taps with the hammer, in a direction nearly parallel with the skull at the point attacked. Considerable force can be used at first and the outer table cut through quite rapidly, but much care must be exercised in dividing the inner table. When the bone is cut nearly through the piece may be removed with the elevator or sequestrum forceps.

In soft skulls, like those of childhood, perforation can be speedily and safely made with the gouge. With the handle upon the ball of the thumb and the shaft steadied by the forefinger (the head being firmly held by an assistant) by a boring movement the sharp gouge quickly cuts a hole similarly to that made by a bullet; as soon

as the dura is reached the opening is enlarged by carefully reaming away the edges until Keen's cutting forceps can be introduced, when, with the flat blade pushed between the bone and dura bite after bite is rapidly removed until the opening is as large as required. A hole two inches across can be made inside of twenty minutes from the beginning of the operation. Since I originated this method of opening the skull, some years ago, I have operated a large number of times and I prefer it to any other way when the skully is soft, because it is by far the easiest and speediest method yet described and if carefully done gives little chance of injury to either dura or brain.

When the trephine is preferred, my advice, of course, is to use the one devised by myself which is composed of on ly three pieces, each easily cleaned and on this account decidedly superior to the Galt instrument; over the Robert's trephine it possesses only the advantage of not falling in pieces at a critical moment; furthermore the center-pin can be withdrawn without removal of the saw from its groove if so desired. The mode of use is too well known to be discussed, but I may perhaps be pardoned for calling attention to the facts that in taking out a large button it is important that the dura be carefully pushed away from the inner table as the bone is cautiously raised with the elevator, and that all rough edges should be carefully trimmed away with the rongeurs before the dura is cut. If from any cause it is deemed best to replace the button and fragments they must be placed in a sterilized basin, immersed in a solution of bichloride of mercury (1 to 5000 or 6000) which must be maintained at a temperature of 100° F.

Any copious bleeding from the bone must be checked; under ordinary circumstances the hemorrhag ceases spontaneously on exposure, but if not it can be controlled by forcibly applying the end of the handle of the bone forceps with a twisting motion, to the bleeding point. Sometimes, however, the "punching" may fail —in which case the sequestrum forceps may be introduced, one blade outside the skull, the other between the bone and dura, including the bleeding point and the bone crushed sufficiently to occlude the vessel. If the blood comes from a wounded vessel in the dura the flow may be arrested by either ligation after opening the dura or (as I prefer) by running a fine, curved needle armed with catgut beneath the dura, including the vessel, and tying. This requires but a moment and often prevents serious difficulty.

Whenever it becomes necessary to make incisions into brain tissue one rule should be invariably followed: to cut parallel to the fibers of the corona radiata as otherwise valuable conducting or association fibers may be severed with disastrous results; those fibers going toward the internal capsule are especially to be avoided. The gap caused by the removal of any mass rapidly fills by eversion of the corona radiata and by granulation tissue if large. The knife used should be very sharp, as should also the fine scissors which may preferably be used in some cases. As little mangling of brain should be done as possible, but it is sometimes impossible to make a clean cut; in cases of considerable laceration of brain tissue it is best to carefully train away all fragments likely to slough; and to cut off ragged edges.

Hemorrhage in cerebral operations was formerly greatly feared; but now we have learned how to manage bleeding. That management of the bone and dura has just been discussed; that of a wounded sinus must differ according to circumstances; sometimes the bone can be chipped away and the sinus tied, compression by the thumb controlling it temporarily; sometimes it is necessary to tightly pack with iodoform gauze—an expedient which has repeatedly proven efficient even in rupture of the lateral sinus. Notwithstanding this the sinuses are to be avoided if possible; if it becomes necessary to work in the immediate vicinity of a sinus it is imperative to trephine in two places—one on either side of the sinus—and to cut away the bone over the sinus, cautiously; then if cut into, instant compression can be made and perhaps a death on the table avoided. For tying vessels of the meninges and brain, I employ juniperized oil gut, carefully prepared and softened. No traction should be exercised as the coats are very friable and often give way if caught in hemostatic forceps. For small vessels in the substance of the brain, hot water irrigation usually suffices; but if they persistently bleed they may be touched with the tip of a Paquelin cautery, or the wound may be packed with iodoform gauge. As the arteries which supply the brain are terminal every vessel should be scrupulously preserved when possible.

Occasionally intracranial pressure (from depressed bone or other cause) is so great as to cause protrusion of brain. If this persists after removal of the cause the redundant tissue must be cut off with scissors if not too extensive. This must *not* be taken from the motor area (the Rolandic region) if possible of avoidance, as serious consequences follow removal of much gray matter in this region. Hernia cerebri cannot follow any operation on the brain if healing by primary union be secured. If, however, from any cause an inflammatory condition is set up in the brain tissue a condition of softening is set up and the resulting intracranial pressure forces the pulpy brain tissue out through the opening; usually the trouble arises in the decomposition of extravasated blood and the consequent development of suppurative meningitis. The remedy therefore lies, in most cases, in prevention by

1. Following such careful details of antisepsis as to secure primary union; and by

2. Allowing no clot of blood to form and remain within the dura subject to invasion by the staphylococci of pus.

If the opening in the skull be small the protrusion is apt to be much more pronounc-d in degree, and especially so if in the frontal region where it is most likely to be found; the mass may increase in size quite rapidly, becoming edematous as it grows, and if sliced off the

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ventricles may be opened even at a level with the skull so great is the eversion of brain. If the hernia be small excision of the mass and covering in with a flap of scalp freely cut may cure. If not, good drainage must be secured by enlarging the opening, and the wounded, inflamed brain treated in the same manner as any other inflamed part. Spontaneous revovery may result even after large quantities of brain tissue have sloughed away, the space within being filled with serous fluid. Washing with hydrogen dioxide, dusting with iodoform and application of antiseptic gauze with free drainage is the only treatment for cases too large for excision.

Fragments of bone having been removed, depressed areas raised to their normal position and the whole cleaned sufficiently well the question of closure confronts the surgeon. As a result of my own experience, I give the following: All oozing having been arrested by the application of very hot water, the hole in the dura is closed with finest catgut, introduced as a continuous suture with a fine, curved needle, with fine strands of catgut placed in the lower angle of the wound for drainage (if necessary). If for any reason the buttons are to be replaced they are now removed from the hot solution and put in their places just as removed; or in small pieces they may be put back upon the dura in a kind of mosaic; or the cavity may be filled with decalcified bone chips. The flap is then cleaned, the encircling ligature removed and all bleeding from the scalp checked. After a final washing the surface is dried with bichloride gauze, iodoform dusted freely over the dura and the scalp closed with a few interrupted or continuous catgut stitches. No silk should be used in the scalp; if catgut is contraindicated because of imminent suppuration silk-worm gut should be used instead. In the posterior angle a few strands of catgut may be laid —for drainage.

The scalp is again wiped dry and powdered with iodoform, dry bichloride gauze applied in great quantities, the head enveloped in cotton and a bandage applied over all. This is not removed until the tenth day unless some special symptom demand it.

Such are some of the rules of practice I have been following in my treatment of injuries of the cranium. In conclusion I wish to offer my

RULES FOR TREPHINING IN INJURIES OF THE SKULL.

1. All cases of depressed fracture, either simple or compound, require trephining and elevation, whether there be pressure symptoms or not.

2. All punctured fractures and gunshot wounds (if not too severe) imperatively demand the use of the trephine.

3. In simple fracture of the skull where any symptoms of brain trouble persist exploratory operation should be done.

4. In all cases of local injury to the skull, whether fracture or bruise, followed by evidence of inflammation of bone, or persistant symptoms of brain irritation, or of pus between the bone and dura, the trephine should be used.

5. In every case of localized injury to the head where unconsciousness persists for more than two hours, exploratory operation, including opening the skull if necessary, should be done.

6. The appearance of stupor some hours after a head injury indicates meningeal hemorrhage and requires trephining at the point of injury if known; or at the point indicated by cerebral localization: the middle meningeal lining the usual source of trouble.

7. Even in very extensive injury to the head operation should be made, since removal of *debris*, restoration of normal contour and cleaning of injured tissues can add but little to the danger and may save life.

8. In every case of doubt exploratory operation is justifiable.

9. Compound fractures, with or without apparent depression, demand enlargement of the wound and careful exploration.

Celiotomy vs. Laparotomy.—The above is the caption of an editorial in a recent number of the *Medical Record*.

The editor discusses it as follows:

"We commented some time ago on the sudden adoption of celiotomy in place of laparotomy by some of the surgeons of this city. While not denying a certain etymological justification to the former term, it seemed to us not altogether unobjectionable for various reasons. Dr. R. P. Harris has been kind enough to send us his original pamphlet, published in 1890, in which he presents with much learning the argument for the change of nomenclature. The argument amounts essentially to this: that *celia* means 'belly,' while lapara means 'flanks,' hence celia is the proper word. To this it must be said, however, that *celia*, according to Foster, has had in the past four different meanings, viz., the abdomen, the intestines, the feces, and 'any cavity of the body such as the socket of a bone' (Hippocrates).

"As we stated before, the word has already been adopted by neuro-anatomists to indicate the cavities of the nervous system. Celiolymph (Wilder) is the cerebro-spinal fluid, while the root 'cele' is in common use in medicine to indicate a cavity.

"While laparotomy may not be strictly accurate, therefore, celiotomy is not inherently much better."

After all why not use the term *Abdominal Section*? It seems that this expresses the meaning more distinctly than either of the other two, and cannot under any circumstances be mistaken for any other surgical procedure.

W. B. D.

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EDITORIALS

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The Need of Hospitals for the Detention of Dogs Suspected of Hydrophobia.

Whenever an individual is bitten by a dog which is supposed to have rabies there is great anxiety on the part of friends and relatives and it is expected from the attending physician to give a prognosis as to the possibility of development of rabies. In the vast majority of cases the fear and anxiety has no foundation as there are not many mad dogs at large at any time, which fact accounts for the frequent wonderful cures of the madstone, in whose curative properties so many—even educated people—believe; yet, a conscientious physician must give his prognosis with some little reserve since he has no positive proof that the wound is not due to the bite of a mad dog. Some patients or their friends, particularly neurasthenics, are in constant dread for a long period after the accident that rabies might some day develop, and by neurasthenics every little symptom is frequently referred to the beginning of the dreaded disease. How much satisfaction would it therefore be for the physician as well as the patients and their friends to have a certain guarantee that the dog in question was not mad. At present many dogs after they have bitten a person are killed and there is no chance of finding out whether they were diseased or not. If these dogs were instead placed into an asylum or hospital for dogs where they could be watched for a sufficient length of time, all fear might be removed from all concerned in case the dog turned out to be healthy. An institution for this purpose would do away also with a great deal of charlatanism and superstition, since charlatans could no longer claim to cure hydrophobia where none existed and the madstone would lose its wonderful effect. We have no doubt that if the boards of health of our large cities would take the founding of a hospital for the purpose stated under advisement, they would meet with the moral support of all reputable physicians.

The Grippe Epidemic in St. Louis Abating.

There has been a decided decrease in the number of cases of influenza within the last two weeks and the medical societies are now discussing the cases of interest. Two rather unusual cases were reported by Dr. Edw. Evers at the Society of German Physicians, St. Louis, at its last meeting, which presented indubitable symptoms of Grippe. In both one leg began to become painful and much swollen and in the one case red streaks due to lymphangitis, extending from the foot upwards, were noticed. The directions of absolute rest were disobeyed and both patients died suddenly under the symptoms of rapid and labored respiration and cyanosis. A thrombus no doubt was carried from an inflamed vein to the right side of the heart and thence into the pulmonary artery, obstructing the latter and thereby causing death. That influenza may cause inflammations is well known and has often been demonstrated by the fact that in operations done under careful aseptic precautions suppuration frequently occurs and sometimes fatal inflammations. Surgeons should therefore, if possible, postpone operations until patients are completely well from an attack of influenza and in times of an epidemic they should carefully inquire whether the patient had recently an attack of this disease.

The Effect of Castration on Woman.

William Goodell, M.D., writes in the *Medical News:*

Does the removal of the uterine appendages affect the sexual sense of the woman, or in any way unsex her? Here we have an embarassing diversity of opinion. Some operators contend that in these respects castration does not affect her at all; others that it does so, and often very decidedly. The truth in such cases usually lies in the mean, as I shall try to show.

In my "Lessons in Gynecology" and in my early teachings I maintained that the removal after puberty of the ovaries and the tubes does not unsex the woman —at least not to a greater extent than castration after puberty unsexes the man. In the one the ability to inseminate is lost; in the other the capability of being inseminated; but in both the sexual feelings remain

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pretty much the same. Males who have lost their testes after the age of puberty are said to retain the power of erection, and even of ejaculation, the fluid being of course merely a lubricating one. The amorous proclivities of the ox or of the steer are the scandal of our highways. Alive to these facts, Oriental jealousy demands in a eunuch the complete ablation of the genital organs. Not only are the testes, therefore, removed, but also the scrotum and the penis flush with the pubes. Hence, to avoid the soiling of his clothes, every eunuch carries in his pocket a short silver tube, which he inserts merely in the pubic meatus whenever he passes his water. I contended, further, that, apart from cessation of menstruation and from inevitable sterility, the woman after castration remains unchanged, having the same natural instincts and affections; that the sexual organs continue excitable, and that she is just as womanly and as womanish as ever. I held that the seat of sexuality in woman had long been sought for, but in vain. The clitoris had been amputated, the nymphæ had been excised, and the ovaries and tubes extirpated; yet the sexual desire had survived these mutilations. The seat had not been found, because sexuality is not a member or an organ, but a sense—a sense dependent on the sexual apparatus, not for its being, but merely for its fruition. My inference was that the physical and psychic influence of the ovaries upon woman had been greatly overrated. In the popular mind a woman without ovaries is not a woman. Even Virchaw contends that "on these two organs (the ovaries) depend all the specific properties of her body and her mind, all her nutrition and her nervous sensibility, the delicacy and roundness of her figure, and, in fact, all other womanly characteristics." This statement I held to be true only in so far as the ovaries are needful for the primary or rudimental development of woman, but not true when once she is developed; for then they are not essential to her perpetuation as woman.

In time, however, I slowly found out that the removal of the ovaries does blunt and often does extinguish ultimately the sexual feeling in woman; although the removal of the testes after puberty is said not to impair the virile sense of the male. This random opinion, however, I very much doubt, despite the maudlin sentiment expressed even about enunuchs by De Amicis and by other travellers in the Orient. For the secretion of the seminal fluid is in itself the great aphrodisiac, and how otherwise can we explain the changed behavior of Abelard toward Heloise after his forcible castration? Giving up this analogy, therefore, in my more recent teachings I adopted that of the menopause as suggested by Keberle. I accepted his analogy, although I could not wholly accept his inference that woman is not affected sexually by the natural cessation of her menses. Keberle sums up his opinion in the following words: "In my own experience the extirpation of both ovaries causes no marked change in the general condition of those who have been operated on. They are women who may be considered as having abruptly reached the climacteric. Their instincts and affections remain the same, their sexual organs continue excitable, and their breasts do not wither up." ('Nouveau Dictionnaire de Medicine et de Chirurgie,").

A riper experience, of which time was the main element, has led me still further to modify my views on this subject. Unquestionably the natural change of life when fully established, but not until it is fully established, does very sensibly dull and deaden the sexual sense of woman, which ultimately disappears in her long before virility is effaced in man. Nor is the survival of this sense after the menopause so essential to woman, because after the cessation of menstruation she loses the power of procreation, which is retained to an advanced age by man. This is a wise provision of Nature, for, did the sexual sense of the wife outlast that of the husband it could not be gratified. Sensible of these changes, a gifted French authoress makes one of her heroines say, with italicized emphasis: "Men may forget the course of years; they may love and become parents at a more advanced period than we can for Nature prescribes a term after which there seems to be something monstrous and impious in the idea of (our) seeking to awaken love. * * * Yes; age closes our mission as women and deprives us of our sex." Now what happens in the natural menopause holds good in that artificially and abruptly produced, with this important difference, that in the latter the sexual feeling is sooner lost. I am willing to concede that in some women, by no means in all, whose health had been so crippled by diseased appendages as to extinguish all sexual feelings, there is, after castration, a partial recovery of the lost sense whenever health has been regained. Yet even in these cases, as far as I can ascertain—for women are loath to talk about these matters—the flame merely flares up, flickers, and soon goes out.

My own experience would lead me to the conclusion that in the majority of women who have been castrated the sexual impulse soon abates in intensity, much sooner than after a natural menopause, and that in many cases it wholly disappears. This tallies with Glavaecke's conclusion that "in most of the cases the sexual desire is notably diminished and in many cases is extinguished." In corroboration of this statement let me cite, out of many cases in point, a few of the more salient ones. The wife, aged thirty-four, of a farmer, so exhausted him by her sexual exactions that his health suffered very seriously: The appendages were diseased and fixed by adhesions. After their removal menstruation and the sexual impulse continued unabated for a little over a year, when the former wholly ceased, and the latter not long after disappeared. Another case was the very ardent wife, aged thirty, of a man who was not so well-mated to her. She was sterile and had excessive menorrhagia from a uterine fibroid, for which her ovaries were removed. Menstruation did not reappear, and in less than two years all sexual feeling was lost. In a third case, a young lady of high intelli-

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gence was reduced to a pitiable condition of ill-health by menorrhagia and by frequent acts of self-abuse. She was not insane, yet, incredible as it may seem, she sometimes masturbated no fewer than eight times in the four and twenty hours. For several months after the removal of the ovaries, which were apparently healthy in every respect, she kept up her bad habits, although the monthly flow never returned. Then the sexual feeling gradually vanished, and she gave up her solitary vice. In a fourth case I removed the healthy ovaries of an unmarried lady of middle age who was queer, but not insane enough to be confined. Toward her monthly periods she was goaded by so irresistible a desire for sexual intercourse that she herself feared her going astray. Not long after her castration, which was done more to save her from reproach than to cure her insanity, she lost the desire wholly and absolutely. She did not, however, regain her reason, and ultimately had to be placed in an insane asylum.

Imlach's case is a celebrated one in medico-legal jurisprudence. This skillful surgeon, after removing the appendages of a woman, was prosecuted by her for unsexing her, and by her husband for spoiling thereby his marital pleasures. The special committee appointed to investigate Imlach's numerous cases of castration at the Woman's Hospital, in Liverpool, reported that they found "a distinct loss of sexual feeling to such an extent as to cause serious domestic unhappiness in not a few instances." The correctness of this report is corroborated from cases in my own practice, of engagements, broken off, of conjugal estrangements, and of marital infidelity.

Let me here remark that I was once consulted by the late Dr. Kerlin about the propriety of removing the ovaries from a feeble minded inmate of his institution, whose shameless intercourse with the other sex was the only bar to her being at large. Being very sanguine that the operation would succeed in its object I urged its performance. He, however, could not get the official sanction which we both wished for our own legal protection, and nothing further was done than to keep the girl under lock and key.

In other sexual characteristics I have not found in these women any marked changes, either physical or psychic. Their affections seem to remain the same; their breasts do not flatten or wither up; they do not become obese; abnormal growths of hair do not appear on the face or on the body, and the tone of their voice and its quality are not changed. In one word there has not been in a single one of my cases a tendency toward any characteristic of the male type. If any change has taken place, it has been in the direction of old-maidhood.

Americrn Medical Publishers' Association.

The first annual meeting of this Association was held in the Grand Hotel, Cincinnati, on Monday, December 4, 1893, and steps were taken in the direction of active, routine work. The by-laws and rules were revised and amended, while the name was modified in accordance with a demand from medical publishers of a general nature who desired to become members of the Association. The active co-operation of every medical publisher is earnestly solicited. Next meeting in Washington, D. C., September, 1894. Officers: President, Dr. Landon B. Edwards, Richmond, Virginia; Vice-President, Dr. J. C. Culbertson, Cincinnati, Ohio; Treasurer, S. MacDonald, Jr., New York City. For application blanks and copies of the Articles of Association, address,

CHARLES WOOD FASSETT, Secretary,
Corner Sixth and Charles, St. Joseph, Mo.

A New and Safe Method of Cutting Esophageal Strictures.—This is described by Dr. Robert Abbe, (*N. Y. Med. Rec*) and is claimed by him te have been successfully used, and to be superior to the "Billroth" method (external esophagotomy and division of stricture by incision, for high strictures only), or internal esophagotomy, an operation always "in the dark" and at times very dangerous. It is especially indicated in cases of dense fibrous strictures such as result from lesions due to caustics. For "impermeable" or very tight strictures, gastrostomy through the oblique incision, parallel to the costal arch is first performed. The esophageal orifice is explored with the finger and a small-conical (gum elastis) bougie guided into it with the finger. Dilate, if it can be done without force, by the gradual method. If unyielding, carry a heavy braided silk ligature by a small bougie up the esophagus until it can be drawn out through the mouth. The largest bougie which the stricture will admit is now introduced so as to put it on the stretch. The string is now drawn upward by the fingers introduced well back in the mouth, and the bougie is felt to advance as the tense string wears away the tense stricture. The operator see saws the string up and down, while his assistant presses the bougie gently through the stricture. Larger bougies are passed in the same way as the stricture yields. When the desired dilatation is attained, a rubber-tube of corresponding diameter is drawn up into the esophagus till one end is above the seat of the stricture and the other remains outside the abdominal wound. A smaller tube is also introduced into the stomach for nourishment. The patient can thus swallow water to clean the mouth, or saliva, without injury to the wounded surface The tube also keeps up dilatation. It is removed on the second or third day and the subsequent dilatation accomplished through the mouth by bougies. The gastric fistula is subsequently closed as soon as the condition of patient will permit the operation, in one case eight weeks after the primary dilatation.—Boston *Med. and Surg. Journ.*

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BOOK REVIEWS

Clinical Gynecology. Being a Hand Book of Diseases Peculiar to Women. By Thomas Moore Madden, M.D., F.R.C.S., Editor. [Philadelphia: J. B. Lippincott Company. St. Louis: J. H. Chambers & Co., 914 Locust Street.

This work, profusely embelished with 259 illustrations, some of which are original, is well worth reading. Many things new can be gleaned from its pages. Due credit is given to the work of American gynecologists for their efforts in this branch of medicine. Conservation is stamped upon the consideration of vital diseases, particularly is this true in Part IV, Diseases of the Uterine Appendages.

He says: "The first duty of the surgeon is to save his patient's life and therefore, if in a case of Fallopian tube or other disease this can be done only by immediate removal of the uterine appendages it is obvious that this operation should at once be resorted to. But under any other circumstances it should never be lost sight of that the uterine appendages are as essential to reproductive capacity in women as the testes are in men, and that by their complete removal the patient is practically unsexed or incapacited for the chief function and primary object of woman's married life. Nor can it ever be justifiable to perform such operations without the patient's full conservance and knowledge of the consequences, a rule the propriety of which is now generally (but fortunately not invariably), recognized and acted on."

To the careful reader who is interested in this subject the above parenthetical remark, "but unfortunately not invaliably" means much. For we are aware that too much of this "spaying of women" is carried on when the life of the patient is not in the balance and when less heroic treatment will effect a cure, and while the sin of omission should not be regarded as less heinous than that of commission. Still we must admit that it is certainly less frequently committed.

The entire work is in the form of lectures and the writer seems to appear before the reader (listeners) in his individuality and what he says carries the weight not easily obtained by any other style.

It is a work equally suited to the student and practitioner. W. B. D.

Black Urine.—Derivates of biliary pigment in the urine may simulate melanin. It cannot, therefore, be concluded that a melanotic tumor exists if the urine reacts to chromic acid. All melanotic tumors are not attended with elimination of melanin in the urine. It should be borne in mind that the urine of patients with melanotic tumors may contain melanin, and yet not react to chromic acid.—*Senator*.

ABSTRACTS

MEDICINE.

The Predisposing Causes of Retention of Bile in the Gall Bladder.—In the concluding portion of an article, "Some Observations on the Pathology, Etiology, and Treatment of Gallstones," by Dr. E. M. Brockbank, of Manchester England, published in the November number of the *Medical Chronicle*, attention is given to the causes which predispose to the retention of bile in the gall bladder (New York *Med. Journ.*). The first one considered is the dependent position of the fundus of the gall bladder. If, says the author, a normal gall bladder and liver are examined—and this is best done on a model taken from a frozen normal liver, such as is used for teaching purposes in the anatomical lecture room—it will be found that the fundus is distinctly at a lower level than the termination of the cystic duct at it junction with the hepatic duct. As the gall bladder is directly apposed to the lower surface of the right lobe of the liver, it follows the direction taken by the anterior margin of the lobe as it curves down to the costal arch. The fundus is movable, and is always the most dependent part, while the cystic duct remains fixed at the hilum of the liver. The line drawn through the long axis of the gall bladder, passing through the cystic duct as its junction with the hepatic duct and through the fundus, will be found to be oblique, running forward and downward, and the difference of level at the two extremities, when the normal gall bladder is in a state of medium distention, will be about an inch. This difference in level can easily be seen in the post-mortem room, where it will very often be found to be much increased, especially if the gall bladder is distended.

Any causes that depress the anterior portion of the right lobe of the liver will tend to increase the obliquity of the longitudinal axis. The wearing of a tight corset is an example of such a cause, as it produces a marked groove in the right lobe and depresses it greatly at the same time. The German pathologists term this altered liver *Schnurleber*, and mention it as probably the exciting cause of gallstones. The consequence of all this is that even under normal conditions the gall bladder has to be emptied against the action of gravity, so that there is a tendency for it to be emptied only incompletely, and this would be more decided where the bile was thickened or contained a sediment. This dependent position of the fundus of the gall bladder, the author says, is much more marked in quadrupeds than in man, and the long axis is almost vertical. When the animal lies on its side the gall bladder is in a much better position to discharge its contents. Can this, the author asks, be a reason why animals, especially dogs,

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generally lie on the side after a heavy meal? In man the posture of leaning forward adopted at the writing table would tend to bring the gall bladder more toward the quadreped position and increases the difficulty of emptying it, and an easy-chair position would act in the opposite direction. The author then consider the relation of the hepatic flexure of the colon to the gall bladder. The flexure, he says, is in immediate apposition to the gall bladder and to the cystic duct and feces collecting here, as they tend to do, at both flexures of the colon in chronic constipation, which occurs so often in women, would interfere with the complete discharge of bile from the gall bladder.

SURGERY.

Asepsis in Laparotomy. — Minnow, at the Gynecological Klinic of Professor Fritsch, of Breslau, has made an investigation to ascertain if a t method of asepsis was possible or practical (*Centbl. f Gynekologie*).

The operative work was done in rooms that were especially reserved for this class of cases. The same rule was carried out with reference to equipment, that is, tables, operating clothes, instruments, aprons, etc. Sterilization was by steam, at 100° C., for one hour immediately before operating. The water was boiled for one hour. Instruments were cleansed with wo-per-cent carbolic solution. Hands (and patient) were sub jected to mechanical cleaning in sublimate solution (1 to 1000) for five minutes, and then bathed in steril ized water. The silk ligatures were sterilized by steam for one hour. No antiseptic solution was used in the abdomen. The dressing was sterilized gauze and cotton.

The contents of the abdomen were tested basteriologically, beforeand after the operation in each case. He thus investigated thirty one cases where the abdomen was opened. Of twenty-eight cases examined at the end of an operation, micro organisms were identified in twenty. The remaining eight showed no trace of bacteria. When the examination was made as soon as the peritoneum was opened, micro-organisms were demonstrated only thrice in twenty-three cases. The inference is that entrance of germs was during the operation from without and that the present aseptic method does not preserve the abdominal cavity from the entrace of germs in a bacteriological sense. But it was also found, that, although the above conditions were present, septic infection was seen only in one case, a patient septicemic before the operation. In eleven of fifteen where bacteria were found, marked elevation of temperature was observed. Examination of the air in the vicinity of the open abdomen showed the same micro organism as the culture from the abdomen. Hence, although of a so-called non-pathogenic nature, these bacteria were apparently the cause of the temperature elevation, 38° C., which in some cases lasted several days. Most of the patients recovered without this febrile reaction where the the abdominal exposure was of short duration. Other facts reported are that it is very difficult to furnish an operating-room with air free from bacteria. That the peritoneal cavity does not contain germs which can be cultivated by the gelating and agar-agar method. That adherent Fallopian tubes or cysts in most cases, even when their contents are purulent, show no living micro-organism. That the abdominal surgeon has to deal in a large number of cases with non-infected tissue and that asepsis, although not perfect, is enough for practical results. When septic infection exists in uterine cases an operation should be preceded by uterine irrigation followed by an iodoform gauze ampon. That infected tissue should be removed Pacquelin cautery rather ha e scalpel or scissors.—Boston *Med. and Surg. Journ.*

A Case of Ileus Cured by Laparotomy.— The following communicatinn of a case of ileus cured by laparatomy is not aimed at proving the fact familar to every surgeon, that the only prospect o success lies in the knowledge of the impediment in the passages, and its removal by laparatomy, and that any other treatment is insufficient, but it aims at proving the importance of early diagnosis and for timely operation by a surgeon summoned by the attending physician. The number of successfully operated cases of ileus is steadily increasing since the introducing of Lister's antiseptic treatment. Nevertheless every sincere surgeon gives a very doubtful diagnosis with refence to the proposed operation. The prognosis would be much less doubtful if the attending physician would understand the disease in time and not think of ileus until peritonitis or even a collapse, have set in, when surgical aid will come too late. I do not deny the correctness of the attempt at overcoming the impediment during the first days of disease by injections into the intestines, irrigations of the stomach, and even by strong cathartics; our case, however, proves the great amount of care to be taken, and the necessity of surgical interference, even when the condition does not appear to cause alarm. The case will now be briefly narrated, as follows:

On August 25, I was called to see Mrs. Z—, aged twenty-six. The patient had had no movement of the bowles since August 22, and was now suffering from excruciating abdominal pains. Upon inquiries I learned the following history:

In February, 1891, the patient, having given birth to her first child a year before, suffered from cramps and pain in the ovarian regions, which were entirely relieved for two months at the German Hospital of this city by the alleged removal of the right ovary. After leaving the hospital, however, she did not feel very well upon resuming hard work. During the five months following the operation the menstruation had ceased. It then became so abundant that it resembled a miscarriage, which patient insists had occurred. On account

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of pain and leucorrhea she was examined, and a prolapse of the uterus was found. She was operated opon again, and since this operation the menses have been irregular, occuring every two to three weeks, and she suffered from frequent pain in the ovarian region.

PRESENT CONDITION OF PATIENT.—Slender woman of healthy appearance. The abdomen is soft and without signs of dulness upon percussion. Palpation causes pain only in the ileocecal region. A scar from a former operation runs from the navel to the symphysis. Besides the above mentioned abdominal pain, the patient suffers now from the same cramps as those before the first operation. They appear every five or ten minutes in paroxysms. Her featurer are distorted as if by pain. The spinal column is extended so as to place the patient into a sitting position. The arms are thrown backward, the fingers are in a convulsive position, half stretched, half bent. After two to five minutes, the patient sinks upon her couch. She vomits everthing she takes, and had no movements of the bowels for three days.

The patient having taken of peaches on August 22, led me to believe that all the the symptoms were due to simple constipation. The excrements were, I thought, pressing the ovarial scar, thus causing the spasms. Apart from the hysterical convulsions, there was noth ing to remind one of a serious disease. I ordered five doses of calomel of ten centigrammes pro dosis (0.01).

In the morning of August 26, I found no change. No movements had occurred. She had taken three doses of calomel without vomiting it. Since she mostly complained of the spasms, I made a hypodermic injection of 0.01 morphine and ordered enemata.

On the same evening the spasms had ceased, after the injection of morphine, but not the abdominal pain. Stools did not appear, in spite of calomel and enemata. The patient was now unable to pass flatus. The vomited masses looked greenish yellow. The abdomen was still soft and not distended by gases, but the pa tient now localized the pain in the region of the stomach.

My diagnosis, ileus, which I had considered at first in the morning, was now firmly established. I could, of course, not exactly localize the lesion. But I presumed that the impediment was caused by adhesion of portions of the small intestines to the abdominal scar, thus obstructing the passage. I was positive in not locating the impediment in the large intestines, since after one injection of two quarts of fluid into the rectum, where in remained for three hours, I could feel the fluid up to the cecum. I still tried another laxative (tinct. rhei) and ordered chloral hydrate for sleep.

On August 27, the condition was somewhat changed. The temperature had risen, the pulse was vigorous, and the abdomen was somewhat distended. The pain was in the entire abdomen. Spasms set in again, for which I gave another morphine injection. I did not feel like delaying the operation for a longer period, and called Dr. Carl Beck for consultation. Dr. Beck believed that same afternoon that we could wait until the next day, since the condition was not so dangerous as to require an immediate operation. We agreed to try once more strong cathartics and irrigations of the stomach. I made a hypodermic injection of 0.005 morphine, ordered one drop of ol. croton,and made two irrigations of the stomach., at 8 P.M. and 11 P.M.

On the following day the irrigations and croton oil had no effect. The abdomen was now somewhat distended. The temperature in the reetum 105.8° F. I sent the patient immediately to the Post Graduate Hospital for operation.

On August 28, at 10 A.M., the operation was performed. Since Dr. Beck was also of the opinion that the impediment was due to an adhesion to the cicatrix in the abdominal walls, the cutaneons incision was made just in the old scar. As soon as the peritoneum was opened two hundred to three hundred grammes of serous fluid was discharged, and the convoluted small intestines pushed forth. Along the old scar nothing abnormal was found. The presumption of a location of the impediment therefore, in this region was erroneous. The small intestines were then examined in the region of the right ovary, and they were found as follows: A convolution of the ileum was found to be adherent to the cicatrix produced by the removal of the ovary. The adhesion was probably caused by an abscess after the first operation. The convolution had the form of a Latin M. The cicatrix was situated across the M in such a manner as to touch four spots of the convolutions. In handling the intestines the fixation was loosened, and the ileum showed a loss of substance at four different points. The two spots in the center were only deprived of the serosa, and therefore were powdered with iodoform. The external spots had also lost the muscularis and the continuity was formed only by the mucosa. Perforation was therefore only a question of a few hours. These external spots were sewed, the intestines pushed back into the abdomen and the abdominal walls closed by sutures.

The patient had four stools by the next morning, in spite of the administration of opium. The pulse was of normal quality, but somewhat accelerated. There was but slight fever, and the pationt felt hungry. The course of the affection was normal after the operation. On the fourteenth day after the operation the patient was discharged as cured.

The above-mentioned condition found during operation explained the symptom. The peristaltic movement of the fixed ileum caused irritation of the old ovarian scar. The same spasms were thus caused, as those before the operation, by the ovarian tumor. The case is very instructive with reference to the importance of an early operation, even in so-called slight cases. The condition of our patient was so little alarming that I was wondering at the prompt obeyance of the relatives to my orders to send the patient to hospital for operation.

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Nobody who had seen her on that morning, especially after the spasms had disappeared by the administration of morphine, could have considered the case to have been extremely serious. And yet the perforation of the ileum was imminent on the day, and would have certainly occurred if it had not been prevented by the operation.—B. S. Talmey, M.D. in *Med. Rec.*

Antagonism Between the Bacillus Pyocyaneus and the Bacillus of Tuberculosis.—Dr. Klein, some months before the forced and ill-advised announcement by Prof. Koch of the influence ascribed to certain products of the bacillus of tubercle in inhibiting the progress of tubercular disease, had already tried the effect of frequent injections of the sterilized fluid containing the chemical products of the artificial culture of the bacilli on the course of the disease, induced in animals by inoculation, but with completely negative results.

He then turned his attention to the products of the growth of the bacillus pyocyaneus. Evidence of tuberculosis having appeared in twenty-six guinea-pigs a month after inoculation with cultures from a human tubercular lung, he, on twenty-three successive occasions within about five weeks, injected (*a*) eight with sterilized culture fluid of tubercle bacilli, (*b*) eight with one of bacillus pyocyaneus, and (*c*) eight with a mixture of these, (*d*) the remaining two being retained as control animals. During the following month all died of tuberculosis except five of those that had been inoculated with the bacillus pyocyaneus. They, however, lost flesh and gradually succumbed in the course of the next six weeks. Though far from satisfactory, the results were so far encouraging, they showing that even in the very dilute form which he had employed the pyocyaneal products they had prolonged life, and greatly retarded the progress of the disease. He accordingly next injected eight guinea-pigs with tubercle as before; and on the manifestation of the disease in all, he injected six of them on thirteen consecutive occasions with undiluted broth cultures (sterilized) of bacillus pyocyaneus. The control animals had died of acute tuberculosis before these remedial injections of the others were nearly concluded, in fact within a month of inoculation; and one of those treated died soon after, with, however, far less post-mortem evidence of disease, but the remaining five were all alive and in fair health and condition two months later, when they were killed for examination. The inguinal glands were found to be enlarged from old inflammatory thickening, but except a few gray points on the livers, and a minute nodule in the lung of one, there were no signs of the tuberculosis which all had manifested after inoculation. The same unequivoal arrest of the disease was observed in another series of four treated in like manner, although unfortunately they, with a number of others, were carried off by an epidemic of pneumonia.

The injections employed with such a degree of success were "three Pravas divisions" of a sterilized broth culture of bacillus pyocyaneus, incubated for ten days at a temperature of 37° C., or that of the human body. *Amer. Journ. of the Med Scien.*

Recent Reports on Europhen.—Lieven finds (*Deut. Med. Woch.*) that in hypersecretory catarrhs, europhen diminishes secretion, while in dry catarrhs it restores the membranes to a normal condition. He employed tampons with an ointment containing 10% of the drug. In children's the dry powder was blown into the nasal cavities. It exerted an admirable action in otorrhea when introduced dissolved in olive oil. Kopp (*Therap. Monats*) obtained highly satisfactory results from the use of europhen in venereal ulcers. His reports cover thirty-five cases of hard and soft chancre, inguinal bubo, and moist papular eruptions upon the genitalis. The parts effected were first washed with a sublimate solution and dried, afther which the powder was dusted over the surfaces. The writer employed equal parts of europhen and boric acid, except in cases where the full stimulating effect of europhen was especially desired. Estay (*Semaine Med.*) found that, in soft chancre, the action of europhen is greatly superior to that of iodoform, not only on account of its more rapid action, but because it is free from disagreeable odor, and has no toxic influence. Furthermore, the property of adhering closely to denuded surfaces, and rendering them aseptic, renders iodoform in Estay's opinion, superior to any remedy of its kind. The writer applied the europhen dry or in the form of an ointment after having had the sores carefully washed with Von Swieten's liquor, or boracic water.

A Case of Extreme Feminine Hermaphrodism.—This case (*Archiv. f. Gynekologie*) presented by Fehling has probably caused more comment than any similar one before placed on record, for it is the first that has been publicly proven a case of external female hermaphrodism.

The case is one of a young lady, twenty-one years old, who had menstruated regularly since fifteen. She had developed an abdominal tumor which at the time of the operation extended from the floor of the pelvis to the edge of false pelvis. The clitoris was represented by an organ in form of a penis eight ccm. long, terminating in a well formed gland and mounted by a minute prepuce. Below this could be seen two folds which also connected with the urethra. Below this was found a second orifice, very large, which ended in a vagina eight ccm. long, at the bottom of which could be felt an infantile retroverted uterus. The left labia majora was well developed while the right formed a sac which resembled a scrotum of small development. The laparotomy discovered a tumor of the left ovary which was entirely removed.

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MEDICAL SOCIETIES

Philadelphia Academy of Surgery.

Regular Meeting October 2, 1893.—The President, Dr. William Hunt, in the Chair.

Dr. Oscar H. Allis read a paper, entitled,

Carbolic Acid Used in Full Strength in Surgery.

Surgeons in early days of antiseptic surgery attributed their success to carbolic acid. As introduced, it was employed in a dilute aqueous or oleaginous solution. For a time it was the sole antiseptic. To-day it is mainly used in general surgery as a bath for surgical instruments. Few surgeons will demand a reason for its abandonment. Few have not personally experienced its benumbing effects, and have thus been able to assign the collapse following its employment to something different than loss of blood, shock of operation, or anesthetic.

With such an experience of carbolic acid in its dilute form I confess that I was quite astonished to learn from my friend Dr. B. F. Gardner, of Bloomsburg, that he was in the habit of using the article in its full strength upon extensive cut surfaces, and that, too, with the happiest results. As this article owes its entire value to Dr. Gardner, I will give in detail his method.

When Lister introduced his paste Dr. Gardner used it quite extensively. After an application to quite an extensive wound surface he was surprised to find it turn white, and that he had used pure carbolic acid. He therefore immediately washed the surface and dressed the wound, keeping it open until oozing had ceased. The case did so well that it inaugurated with him a line of treatment that he has extensively employed. As a typical application let me take an amputation of the female breast. After its removal and the ligation of the bleeding vessels carbolic-acid crystals, dissolved in sufficient water for solution, are applied with a sponge to all parts of the cut surface. Immediately upon the application of the acid the tissues turn white, which is a gaurantee of its thorough action. The wound surface is then washed with water previously sterilized by boiling, and then approximated with provisions for drainage. This is especially necessary, as for twenty-four hours the oozing must find ready exit. During the first few days there is a slight local hyperemia along the borders of approximation, but this declines without crisis.

Dr. Gardner claims for carbolic acid applied in official strength:

1. That no systemic absorption attends its use, and hence no danger, no shock.

2. That is is a local anesthetic. Hence there is not as much pain after the operation.

3. That it is in a measure a hemostatic, acting especially upon the capillary vessels.

I have taken the removal of the mamma only as an illustrative case. In all operations outside of the pleuritic and abdominal cavities, such as amputations and resections, Dr. Gardner resorts to it.

In hydrocele he lays open the sac freely, then applies carbolic acid to the tunica vaginalis, and concludes with packing or drainage. The operation is not followed by excess of any kind, and recovery is prompt. He has used it in gunshot wounds of the knee and ankle. If he gets such a case after suppuration has set in he freely opens the joint, applies the carbolic acid to every part, washes out all excess freely, recures ample drainage with fixation, and confidently awaits the result. Ankylosis may follow, but this will depend on the extent of the injury, the delay in treatment, the conduct of the patient. Dr. Gardner has used bichloride of mercury, hydrogen peroxide, iodoform, etc.; none of them has answered the claims made for them; all have disappointed him, but pure carbolic acid never.

I have said that Dr. Gardner does not use this upon serous membranes—*i. e.*, within the abdomen. I must modify this statement. In a case of strangulated hernia, in which he found patches of sphacelus—not deep, but threatening—he cautiously applied the pure acid and returned the gut. Fortunately, the strangulation had been arrested by operation in time to save the gut. Nothing eventful in the subsequent history, which was speedy.

I do not know Dr. Gardner's theory of the actions of this powerful drug, and shall attempt no explanation. The turning of the wound surface white is due probably to the coagulation of the albumin of the tissues and fluids of the wound surface, and not that the acid has a necrotic effect. That it does not produce a true destruction of tissue may be inferred that after a large breast or thigh amputation he will have primary union and no suppuration. In its use in hydrocele a half drachm or more is injected into the tunica vaginalis, and resolution without suppuration ensues. It is possible that by its action upon the wound surface an action similar to that obtained by heat may be produced and thus facilitate repair.

I will conclude this article by briefly stating my own experience with it.

On entering the wards of the Presbyterian Hospital I found that one of my amputations of the thigh had not done well, and looking at the stump, found it swollen and of an angry, threatening character. The seam of approximation was perfect. I therefore removed all the sutures, and separating the flaps, found them almost in a stage of gangrene. Taking carbolic acid pure, I applied it freely, pressing it into the tissues with the sponge applicator, removed the excess, and, packing the space between the flaps, renewed the dressing. This was done without anesthetic and without apparent pain. The exposed surfaces soon began to granulate, when they were approximated and recovery soon followed.

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I have also frequently applied it upon a carrier with cotton to sinuses and after curetting glands.

Dr. H. R. Wharton asked if Dr. Allis had seen carbolic-acid poisoning from the use of the agent in this way. He had never seen much trouble from the use of carbolic acid except in children. At the Children's Hospital he had seen two or three cases where its use had produced a marked constitutional effect. In one instance where a large nevus was dressed with carbolic acid application there was a dark colored urine and other symptoms of poisoning.

Dr. William J. Taylor thought the application of pure carbolic acid to a fresh, clean surface, such as was left after the removal of the breast, was totally unnecessary. If there had been a thoroughly clean skin, clean instruments, ligatures, and hands, there would be primary union. If such a fresh surface was smeared with carbolic acid there would be a large amount of oozing. His experience with a few cases where strong carbolic-acid solutions had been used, a number of years ago, had been that healing was much retarded. As an application to suppurating surfaces such as Dr. Allis had spoken of, and where one wished a cauterizing and disinfecting action, he considered carbolic acid one of the best agents that we have, and he used it frequently.

Dr. W. Joseph Hearn said that if carbolic acid was applied to a raw surface, otherwise healthy, one would expect to have a certain amount of necrosis of the tissues. Some cells would be destroyed, and afford a soil for the propagation of germs.

Dr. Richard H. Harte said that Dr. Levis had been in the habit of using carbolic acid for its cautery effect. He remembered several cases where he had used it freely, producing large sloughs over the posterior surface of the thigh.

Dr. Allis said that, in regard to poisoning, Dr. Gardner alleged immunity from poisoning from the fact that the application seared the whole surface and closed the small vessels, and nothing was taken into the system. Dilute solutions were rapidly taken up. In one case, where he had operated on two herniæ in the same individual, there had been a good deal of collapse following the use of a dilute solution of carbolic acid

He was not prepared to say whether it had a necrotic action or not. He did not understand how Dr. Gardner got primary union, using it as he did, if it had such an action.

He thought that Dr. Gardner had probably begun its use with the idea that there might be left after amputation of the breast some cells which it would destroy. He did not bring this forward thinking that any one would be led to use it in these cases, but there was a big lesson in this use of carbolic acid. There were places where it was valuable—for instance, in deep sinuses and pus tracts. He had injected it into a psoas abscess so that it would run out—probably eight ounces—without the slightest constitutional effect.

He could subscribe to what Dr. Harte had said. Care must be taken that the carbolic acid did not come in contact with the skin. If it touched the skin it would blister it, but when applied to a raw surface it did not have the effect which we should expect. In a few cases where it had been injected into the tunica vaginalis the patients had almost died, but in a large majority of cases carbolic acid pure in hydrocele effected a happy cure and without seppuration, hence without necrotic action.

In collecting some cases of accidents in the treatment of hydrocele such cases had been reported to him.

As to whether or not the application in recent surgery was necessary or advantageous, he left that for individual opinion, He had seen bichloride solution do as much mischief as carbolic acid probably could do in preventing primary union.

Dr. L. W. Steinbach said that a number of years before he had had the pleasure of assisting Dr. Levis in the removal of an ovarian cyst in private practice—at that time the spray was used—the assistant who had charge of the spray put the carbolic acid into the bottle and the water on top of it without mixing the two, so that a spray of pure carbolic acid was delivered into the wound and on to the operator's hands. The doctor's hands became so benumbed that he was unable to introduce the stitches. The woman, however, made an excellent recovery.

Of course every one knew the good success of Dr. Levis in the treatment of hydrocele with carbolic acid. He was careful that none got into the connective tissue or on the scrotum. The speaker had never seen an accident in any of his numerous cases.

A Report of Three Months' Service in the Jefferson College Hospital

was read by Dr. W. Joseph Hearn.

The object of this report was not to include every minor operation, but only those which might prove of interest

Fecal Fistula.—A young woman, married, two weeks after her first confinement, suffered from a strangulated femoral hernia. Her physicians professed to have reduced the hernia under ether. Subsequently an abscess formed at the femoral ring, was opened, with escape of gas, pus, and some fecal matter. Four months after she presented herself at the hospital, suffering from an almost constant escape of gas and fecal matter from a small tortuous sinus below Poupart's ligament. By means of a very small flexible bougie, the author was enabled to find the way into the bowels. He cut down on this bougie, following up the sinus until the bowel was reached. As he could feel no spur, he concluded that there was simply a small opening in the bowel. He freshened the edges and closed the wound. Twenty four hours after symptoms of obstruction of the bowel occurred, with peritonitis, followed by death in three days. A post-mortem examination revealed that, instead of perforation of the bowel with

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a small opening, a large section of the bowel had been caught in the ring, and at least two thirds of the circumference had been lost in the slough. The lesson taught him in this case and in other similar cases that he had seen, that the abdomen should be opened in the middle line or outside of the linea alba, in addition to dissecting down through the sinus, in order to find the condition of the bowel and the amount of lost tissue. This had been a case for lateral anastomosis.

Cancer of the Colon.—A second case of abdominal section had the following history: A woman sixty-three years old was admitted to the ward suffering with ob struction of the bowels of three week's duration. The abdomen was enormously distended, and there was fecal vomiting. An incision was made in the middle line below the umbilicus. The intestines were so much distended that it was impossible to ascertain the seat of obstruction. An incision was made into the small intestines and their contents were milked out. This procedure necessarily caused much fecal matter to be spilled in the abdominal cavity. After reducing the contents of the abdomen the obstruction was easily located. It was a carbinomatous contraction of the middle portion of the transverse colon, with extensive adhesions to the surrounding parts. As it was found impossible to remove the section of bowel involved, an artificial anus was made in the right side. The colon just above the ileo-cecal valve was attached to the abdominal wall and, as the symptoms were urgent, immediately opened. The peritoneum was so tender and brittle, due to inflammatory infiltration, that it was with great difficulty that sutures could be made to hold. The same difficulty was encountered when he attempted to close the opening made in the small intestine. The parts were so thickened that it was almost impossible to invert the intestinal walls for the Lembert sutures. The intestines were returned with great difficulty into the abdominal cavity, which was then thoroughly irrigated. The patient rallied from the shock promptly. Her temperature did not go beyond 101° F. She improved daily, and left the house in four weeks almost as well as she was before the obstruction occurred. The carcinoma had given her but little trouble before the obstruction—not sufficient to cause her to call for medical advice.

Femoral Aneurism.—A third abdominal section was for ligation of the external iliac artery for an aneurysm involving the femoral under and beyond Poupart's ligament and a large portion of the external iliac in the abdominal cavity. The patient was a man, aged forty, and in good health. He determined to do the transperitoneal operation. The artery was tied without much difficulty by placing the patient in the Trendelenburg chair and packing the bowels, away from the point where he wished to place the ligature, with large pads of antiseptic gauze. The patient made a good recovery, and left the hospital cured. The author had two years previously ligated the femoral artery of the same limb.

Two Cases of Amputation of the Penis for Epithelial Cancer.—In one case the glands in the left groin were involved, and were removed with much difficulty. The left limb was very edematous, due to pressure of the enlarged gland on the veins. The difficulty of removal was due to the proximity of those glands to the veins. The patient made a satisfactory recovery.

Five Cases of Hydrocele were operated upon by the open method. That is, the sacs were incised for about an inch; the edges of the sac were caught with hemostatic forceps to prevent difficulty in getting into the proper cavity. After the cavity was thoroughly dried with antiseptic gauze, pure deliquesced carbolic acid was applied to every part of the serous membrane. Then an iodoform gauze drainage was inserted and left for forty-eight hours. Should the incision be larger than necessary, a few catgut sutures could readily be introduced, to partly close the opening. The drainage which this mode of procedure admitted of insured absolute success. Anesthetics were not necessary, as the line of incision could be frozen with chloride of ethyl, and the application of the acid or any other caustic caused no more pain than when injected. Those cases where the sac was very thick and could not collapse, or where covered with calcareous plates, were not adapted for this mode of treatment. Only entire or partial excision of the sac would cure that class of cases. The operation of laying open the sac and attaching it to the scrotum, and then packing, he never performed, on account of the subsequent deformity.

Three Cases of Varicocele with Elongated Scrotum.—He had ceased to perform the operation by the subcutaneous method. Both these patients had been operated upon by the open method, and a section (one inch) of the veins removed. The tied ends were then sutured together with catgut, which insured the shortening of the scrotum. Catgut was also used for ligature of the veins. The most satisfactory way to reach the veins was to transfix the tissues with knife or scissors, each side being lifted with a forceps as the gynecologist approached the peritoneum. It could be done rapidly and without danger of wounding the vein. With proper antiseptic precautions and properly sterilized catgut the patient would make a more rapid recovery than with the subcutaneous method. He never used drainage, but closed the serous membranes with catgut and the skin with silk.

Amputation of the Forearm for Epithelioma of the Wrist, Which Almost Encircled the Arm.—For two years this patient had submitted to the application of caustics from a cancer curer until the pain became unbearable. The wound healed by first intention, not a drop of pus having been seen. But the pain in the arm never ceased. A multiple neurosis followed the local one after the patient left the hospital, and the patient died eight weeks after the amputation. Alcoholism could not be ascribed as a cause. Was it the continued use of the caustic applications, which several times

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caused sloughs, so the patient informed me, that caused exposure of the bones and the tissues between the bones?

Four Cases of Amputation of the Thigh; One for Sarcoma Springing from the Periosteum of the Thigh Bone about the Junction of the Upper with the Middle Third.—The tumor measured twenty-eight inches in circumference, and approached the joint so far that an amputation of the hip was thought proper. Wyeth's pins were inserted and the rubber band was applied. The flaps were cut for hip amputation, but when the bone was reached it was found in such good condition that the head was not removed. The patient made an excellent recovery and gained much flesh. She was seventy years old and much broken in health when admitted to the hospital.

The second case of amputation was for a chronic syphilitic endostitis and necrosis of the lower end of the femur, with an old synovitis of the knee joint, in a man forty five years of age and in an almost exhausted condition. The amputation was done at the junction of the upper and middle third of the thigh. The marrow was soft, almost fluid, and entirely disorganized, and it was not deemed proper to leave it. As the bone seemed healthy, he curetted up as far as the trochanter major, and packed with iodoform gauze. The patient suffered very much from shock during and after the operation, but from that time on he improved daily without a single untoward symptom until entire recovery followed.

The third case was that of a man aged thirty-three years, admitted to the hospital suffering from acute gangrene of the left leg. His history was that three weeks previous he had a second attack of an apparent ecphyaditis under the care of Dr. W. L. Coplin. The pain, however, soon subsided in the right iliac region, but severe pain was felt down the left leg. The pain was excruciating, and could scarcely be controlled by large doses of anodynes. Soon after the pain began it was noticed that discoloration of a linear character occurred. It followed the course of the superficial nerves and apparently involved only the skin. Soon gangrene of the entire limb occurred, with great depression of the nervous system. A line of demarcation formed above the knee, and amputation was advised. The limb was removed at about the middle third of the thigh. The operation was followed by great shock. Very little blood was lost. He rallied for a few days, when gangrene commenced in the right limb. At the same time it was noticed that there was no perceptible pulsation in the left radial artery. He sank slowly and died at the end of ten days from an extensive gangrene of the right leg. His previous history was not good. He suffered from chronic alcoholism. He did not suffer from disease of the valves of the heart, but from a fatty heart. An embolus was the apparent cause of the gangrene.

The fourth case was that of a boy aged twelve years, who previous to this illness never was sick. On April 1st he began having pain in the left knee, and was treated for rheumatism. Soon the swelling involved the knee joint as well as the whole leg below. His case was then supposed to be one of acute cellulitis, although there was no history of injury or any previous abrasions. He was admitted to the hospital, and several openings were made in the leg and large quantities of pus evacuated. His temperature fell for a few days, but soon arose to 103°, and he was slightly delirious. Then it was found that the joint itself was involved. It was opened and a large quantity of puro sanguinolent fluid escaped. Still the temperature continued above normal and the boy was still delirious. Other pockets of pus were looked for and opened. Bedsores were threatened and his condition grew worse. At the third operation it was discovered that the boy was suffering from epiphysitis of the tibia. Necrosis at the epiphysis had occurred. As the knee joint was disorganized and the leg from the ankle to the knee was one mass of suppuration, an amputation was advised and accepted. He bore the amputation well, and almost from that day his delirium ceased. The wound healed promptly without suppuration. Very little was said of epiphysitis in the text books. The author thought this disease occurred more frequently than we were aware of, though suppuration and necrosis were very rare. He had the history of three other cases, though the symptoms were of a much milder type than in the case just mentioned.

Floating Cartilage of the Knee Joint.—The cartilage was exhibited. Its dimensions were an inch and a half by three quarters of an inch. The man, aged forty-five years, suffered for many years with what he supposed to be rheumatism in his left knee. It had never impeded his locomotion very much. For a long time it must have been too large to impinge itself between the tibia and femur. Its position was on the left lateral aspect of the knee joint. The author cut freely down on it and removed it without difficulty, as it was not attached to any of the fimbriæ of the synovial membrane. Considerable synovial fluid escaped. The synovial membrane was closed with catgut sutures and the skin as usual. No drainage was used. He made a good recovery without ankylosis.

Neurectomy of the Infra-Orbital Nerve in a Lady of Seventy Three Years Who Had Suffered Many Years From Neuralgia.—Three years previously the author had removed the inferior dental nerve for her, with relief for two years. He removed the entire nerve by a trephine opening at the angle of the jaw to the mental foramen After two years the pain returned in the infra-orbital nerve. This was removed by making a V shaped notch in the lower border of the orbital bone down to the foramen. By that means he was sure to secure the nerve with all its filaments. Then, lifting up the eyeball with a retractor and breaking through the thin floor of the orbit, he was enabled to break off the nerve as far back as its origin. Very little deformity followed the removal of the wedge shaped bone. It was now five months since the operation, and there had not been any return of pain.

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Amputation of the Tongue.—The patient was a man, aged seventy-three years. He suffered for many years with papilloma of the tongue, shown in small white plaques. These were partly removed by transfixing with fine needles and tied off. When admitted to the hospital about one third of the tongue was infiltrated. It was of twice its normal thickness, very hard and painful. The glands at the angle of the jaw were also involved. The tongue was transfixed near its tip, and a strong ligature drawn through to give control of it. The patient was placed in a Trendelenburg chair and the head so depressed that no blood could enter the trachea. After etherizing, chloroform was used during the operation. Those who had not used the Trendelenburg chair for operations about the face, nose, and fauces could scarce appreciate its usefulness in preventing suffocation from blood entering the trachea. It prevented the many interruptions to the operator on account of that accident. It did away with the necessity for tracheotomy. With the tongue elevated and pulled strongly forward it controlled hemorrhage, as suggested by Heath. Then, with a pair of scissors or a knife, the mucous membrane was divided in a smooth, even, curvilinear line at the junction of the tongue with the floor of the mouth. The object of this line was for the subsequent attachment of the upper portion of the tongue to it. After the tongue was freed as far back as necessary ablation was commenced. With a pair of scissors the tongue was divided by a series of snips until one of the lingual arteries was reached, when it was quickly caught and tied. The pulling forward of the tongue so controlled hemorrhage that but a few drops of blood escaped. Before the next artery was reached another ligature was drawn through the stump, that it too might be under control when the tongue was divided. The stump was then brought forward and sutured to the mucous membrane of the floor of the mouth. By this method there was very little surface exposed for absorption of septic material, and the prevention of septic pneumouia was greatly enhanced. This patient was fed with a tube attached to the nozzle of the feeding cup, and by that means the food was placed far back in the fauces and did not come in contact with the wound. The enlarged glands were removed, exposing the large vessels of the neck. The patient made a rapid recovery. The stump and floor of the mouth united rapidly, and in six days all the sutures were removed. He suffered much from shock after the operation, but soon rallied. About half of his tongue was removed.

Resection of Knee Joint.—A woman aged twenty years had suffered for ten years from traumatic synovitis. Her general health was good. There was no history of tuberculosis. When the joint was opened an inflammatory erosion of the entire joint surface was found. The ends of both tibia and femur were sawed off. Temporary fixation of the bone was made with catgut sutures and a plaster splint applied. Recovery satisfactory. She left the hospital in eight weeks with good union. She was directed to continue to wear a light splint for a few weeks longer.

Four Amputations of the Mammary Gland For Scirrhus.—In each case the axilla was opened and all its contents were removed. Fat was removed, regardless of the fact that in two cases no enlarged glands could be felt. Yet in both cases, when the axilla was opened, minute glands could be distinguished in the fatty material removed. He operated in all cases of carcinoma of the mammæ where the disease had not so far advanced that its removal was impossible. This rule applied to chronic or fibroid scirrhus as well as to the acute variety. He felt it was more beneficent to the patient to let her die of internal cancer than to die of exhaustion due to local ulceration, with all its physical and mental distress. However much confidence the patient might have in her family doctor, who advised her not to have it touched with the surgeon's knife, sooner or later she would disobey his instructions and consult a surgeon, or else fall into the hands of the cancer doctor, with his escharotics. Which caused the greatest physical suffering?

Five Cases of Harelip.—One of these cases was simple. Three of the cases were complicated with cleft palate, both hard and soft, and one case with a double cleft, with the intermaxillary bone projecting. In this case the author removed the intermaxillary bone believing with Rose that it interfered with the proper approximation of the lateral maxillary bones. The teeth that formed in it were never perfect and were ever useless. He did not use harelip pins in approximating the parts, but used silkworm gut, both at the vermilion border and at the cutaneous surface. He used either catgut or silk sutures for the intervening parts and the mucous membrane. The advantage of the silkworm gut over pins was that it could be left in longer without cutting or sloughing and supported the parts equally well. He never operated on a child under one month of age. There was no necessity for it, and union was much less certain.

Four Cases of Suprapubic Cystotomy.—There was one case of chronic cystitis of ten years' duration, with a small phosphatic calculus, also one of a foreign body in the bladder, part of a soft catheter, and there were two cases of stone in the bladder. The specimens were shown. The largest stone was from a male patient aged sixty-one years. He suffered for six years with all the symptoms of stone, but his sedentary habits made it endurable until a few months before he was admitted to the hospital. The stone weighed five ounces and was $7^{7}/_{32}$ inches in its greatest circumference It was smooth, and to that fact was probably due his long tolerance of it. It was probably a uric acid calculus with a phosphatic crust. The author had formerly been prejudiced in favor of lateral lithotomy, as he had always operated by that method· Now he was convinced that in adults the proper treatment was either suprapubic cystotomy or lithotripsy, the choice of treatment depending upon the size of the stone or the con-

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dition of the bladder and kidneys. He had never crushed a stone in a young child, yet he thought it the proper treatment.

Dr. Allis asked Dr. Hearn if he had seen any slough ing in the cases of hydrocele where he had used carbolic acid.

Dr. William J. Taylor had had the pleausure of seeing Dr. Hearn operate in the case of intestinal ob struction referred to. He never had seen such distention of the intestine. The small intestines were larger than the average colon, and the tissues were so soft that the sutures tore out. It was simply a miracle that the woman survived.

Dr. W. W. Keen said it was impossible to refer in detail to the five series of cases which Dr. Hearn had reported from a service of eight or ten weeks, but there were two points to which he would like to call attention. One was the use of the Trendelenburg posture in all cases of operation about the mouth and nose. A pre liminary tracheotomy had often been advised and had been done in these cases. Of course, tracheotomy was not one of the most serious operations, but it did add to the complications. As Dr. Hearn had said, the speaker believed that the use of this posture would practically do away with preliminary tracheotomy in most cases, and always if the tracheotomy was for the purpose of preventing blood entering the larynx and lungs.

He had noticed also with much pleasure that Dr. Hearn had drawn attention to the importance of uniting the mucous membrane after removal of the tongue. He thought that this was of great importance, in order to avoid as far as possible any opportunity for septic infection. In removal of the lower jaw in a number of cases he had endeavored to unite the mucous membrane so as to cover in the raw surface entirely. If we did that there was no opportunity for infection of the system.

These two points in the surgery of the mouth were of great importance, and it was only in late years that he had recognized their importance; but experience had taught him the immense benefit to be derived from these procedures.

Dr. Hearn would state that he had never seen sloughing from the use of pure carbolic acid. In one case, where the surgeon introduced a dilute solution, sloughing followed, and a few days later the testicle could be seen. Where he had used pure carbolic acid he had never seen any accident. He had always injected it until he had begun this procedure of opening the sac. He had never seen the latter operation fail. The opening permitted thorough drainage and was sure to succeed—New York *Medical Journal.*

Clams and Cremation.—A small crematory was recently built in a New England town, and the dedication ceremony consisted in a clam-bake, the oven of the crematory being used to cook the clams and corn.

NOTES AND ITEMS

A Plan to Remedy the Dispensary Abuse.—The dispensary abuse, as it has been called, was recently discussed with much spirit in the Academy of Medicine (N. Y. *Med. Times*). The consensus of opinion with the members seemed to be that the profession was being defrauded out of its just rights by these dispensaries, and that a halt should be called.

One disputant inquired: "In what other profession or trade could there be found an equal number of men who devote so much time to charity work, as in the medical profession?" Of course the question was not answered.

It is a fact that there is no dearth of medical men who are willing to do this dispensary work, and there must be grounds for it.

The reasons seem to be: First, clinical experience; and second, the hope of obtaining patients who will pay.

A plan which would be much more economical to the public, and more just to physicians would be to establish a bureau in the Department of Charities and Correction or in the Charity Organization Society, for the registration of patients who require free medical aid, and for such physicians as are willing to do this service. When application is made to this bureau by a patient needing attention, he should be referred to the physician who has signified his willingness to serve in such cases, nearest to the residence of the patient to be treated.

It can be safely left, we think, to physicians to collect a fee for the service, if the patient is found able to pay.

Every physician who registers should promise never to refuse service, but to notify the bureau of any patient he believes to be able to pay and who refuses to do so.

The bureau shall investigate and report the result to the attending physician, which shall be final. Refusal to attend a case when notified to do so by the bureau, shall be sufficient cause for dropping a name from the list.

In a short time the indigent people of this city will be so registered, that there can be little opportunity for imposture, such as is now claimed to be practiced upon our free dispensaries. The immense amount of money now invested in costly buildings can be devoted to other more necessary work, and a vast amount of time saved to the attending physicians, who would do this work within their private office hours, or in special hours to be fixed by them.

There would be less danger from contagion, because there would be no great aggregation of patients at a single point. They would be divided amongst a great number of physicians, hence better service could be ren-

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dered than is possible in a dispensary when an enormous number are treated in a short hour.

A plan like this, which we will admit is radical, will enable the experienced physicians, by means of assistants, to take care of the poor people in their respective neighborhoods.

It rests with the profession whether it will correct this growing evil.

Will the Academy of Medicine, or the County Medical Society make the attempt?

Our plan will provide a large number of small cliniques, where now we have a few large ones.

There are several reasons why dispensary patients would get much better service than at present:

1. They would not have to spend so much time in waiting, and that means a great deal to many a mother of a family whose time is valuable, either as a bread winner or in the care of the family. Some persons seem to think that time is of no consequence to these poor people.

2. They would be able to consult a physician if required in emergency, without waiting for the dispensary hour.

3. The physician or his assistant would be able to give more time to the case, and thus greater satisfaction will result to all concerned.

We are asked, "How about the supply of medicines?" In reply we will say that the druggists we have consulted are perfectly willing to furnish the drugs at actual cost, where so indicated by the physician, and many would be willing to dispense them free where the case is certified to them as worthy and the prescription is not too expensive. We could at least get as good drug service in this way as is provided by the majority of the dispensaries.

The Department of Public Charities and Correction would doubtless establish bureaus for dispensing drugs free in different parts of the city to such as were unable to afford the small sum charged by the druggist.

There can be no doubt that there are thousands of patients who obtain free treatment at these dispensaries, who would under other circumstances employ and pay a physician just as they did before these institutions were organized. There are plenty of cases illustrating the fact that physicians are being defrauded and we could give some ourselves.

We recall the case of a man who fell from a public building. The ambulance not arriving, he was removed to his home and our services requested. The treatment was long and tedious, and we were gladly paid one hundred and fifty dollars for our attention, which we should not have received but for the tardiness of the ambulance: We have no doubt every physician could report similar cases.

That dispensaries do good and worthy service no one will deny, but the question is, "Is not much of it done at the expense of the general practitioner?" The dispensary authorities claim that they are doing all they can to correct abuses, but admit that many patients are treated who should pay for treatment, and they also admit that they are powerless to prevent it.

It is useless to appeal to officers of dispensaries for reform in this direction, as they are too much interested in building up their pet charities to see that reform is needed. This work must be done by combined effort of the general practitioners, and those, too, who are not blinded by selfishness born of dispensary association.

A Medal Worth Having.—The gold medal which was presented to Professor Virchow, of Berlin, on the occasion of his seventieth birthday, recently, weighed nearly six pounds, and represented a value of about £350 in pure gold. Mme. Virchow received a silver, and each of the Professor's children a bronze, replica of the medal. The obverse shows the bust of the Professor, with the legend: "RVDOLPHVS VIRCHOW. POMMERANVS CIVIS BEROLINENSIS: ÆTAT LXX" On the reverse is an allegorical group redresenting the genius of investigation winged, and carrying a flaming torch in the left hand, while with the right he lifts the veil of Isis. At the foot of the Isis column is a table with the representation of the Berlin Pathological Institute. In the background Science, on her lap an open volume, is seen contemplating a skull, while around her are other pathological emblems. The inscription on this side is "Omnis cellula a cellula."—*Medical Record.*

Psychical Contagion in Schools.—Dr. Rembold, of Stuttgart, describes a peculiar psychical outbreak. He was lately called to a school for girls in consequence of one of the little pupils having fallen back, in an unconscious state, on the form on which she was sitting—an incident which was followed in a few minutes by others of the class fainting away, while others again broke out into crying and trembling fits, those who could articulate complaining of feeling very ill. The alarm and confusion arising from this strange occurrence spread to the other classes, in one of which a girl thirteen years of age manifested the same nervous symptoms which had been already witnessed in the first class. On Dr. Rembold's arrival he found among the forty little girls affected that ten were quite unconscious, seemingly sunk in profound slumber, a condition from which they could not be aroused, even with violent shaking and when loudly called upon by their names. Of those who retained consciousness he describes some as trembling all over, weeping and sobbing aloud, while others of them seemed to be dazed and terror-stricken at the sudden illness of their schoolfellows. These latter were immediately relegated to another room and the agitated ones were brought to an open window, and with every encouraging and reassuring word and deed were made to draw deep breaths of the fresh air. Those who were still in an unconscious state were brought round by strong douches of cold water and energetic appeals to them by name, after which they were sent home, whence, either later in the

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day or next morning, they returned to school without apparently any serious after-effects from their seizure. The interesting point in this noteworthy outbreak is the spread, as if by contagion, of the nervous or convulsive symptoms from individual to individual and from class to class—a phenomenon amply attested as having occurred in previous centuries and which has been variously classed as St. Vitus's dance in Germany and as typhus cerebralis convulsivus by Italian physicians. In these days the name for it is auto suggestive seizure, the peculiarity in the cases reported from Stuttgart being, as Dr. Rembold points out, the extraordinarily short period within which the symptoms arose and disappeared. — *Berliner Klinische Wochenscrift; Medical Record.*

Diagnostic Threatenings.—In matters medical as most things else, our fears are frequently but chimeras; and in no branch of the science, as both profession and people can attest, is this better illustrated than in diagnostics. Nothing, perhaps, is more common with some physicians than to threaten their patients with evils that never materialize—a practice that works incalculable harm to all concerned. Smith is "threatened with preumonia;" Jones' wife, "with typhoid fever;" Brown's baby, with "measles," "meningitis," or "mumps;" and so on till both patient and family are on the tenters, the whole neighborhood agog, and the doctor's end apparently attained. At times, indeed, these threatenings are the convictions of an honest, though indiscreet, attendant; but oftener, no doubt, they indicate the craftiness of one who would either conceal ignorance or further selfish interests. There is hope for the former, for he may yet learn the language of disease, and appreciate the value of reticence. His threats simply mean that he thinks a certain disease exists, but, as the symptoms are not plain to him, is not quite sure of the diagnosis. Most, if not all, intelligent practitioners know, of course, that one can be threatened with, and still escape, the exanthemata, pneumonia, enteric fever, and other specific diseases, although we have in mind one who has threatened his patients so much that he is at last fearful himself; and thoughtless statements to the contrary are to be counted a mere *lapsus linguæ*. The position of the latter—the pseudo-diplomat—is, however, in his opinion, impregnable. If the prophecy be fulfilled, he was the prophet; if not, he prevented it; and, whatever happens, he poses as a mighty man, receives the plaudits of the crowd, and gathers much gear. His success is but ephemeral, however, for, like everything unreal, his methods cannot stand the test of time. He is watched; confidences are exchanged; a better man is consulted; comparisons unfavoroble to the suspected are made; and thus is he [illegible] may, as in a case known to us, fall a prev [illegible]ne malingerer, and then his defeat is a verit[illegible] rout. An adept at "breaking up" all manner of diseases may flourish for a season, but he will oftener succeed in breaking down the confidence of the public. If he would succeed, the physician must observe much, think more, and reserve most; and the better balanced the man of medicine, the more will perception, reflection, and discretion be found to enter into his composition.—*Massachusetts Medical Journal.*

A Decline in Patent Medicines in Great Britain.—The *Chemist and Druggist* gives an instructive comparative study of the popularity of patent medicines, as indicated by the average annual sales of revenue tax stamps. The law in Great Britain requires a stamp to be affixed to all proprietary remedies, and the sale of these stamps shows the popular demand from year to year. During a period of twenty-seven years, ending in 1887, the average annual increase was $25,000; during the period of five years ending in 1892 the average annual rise was $72,000; but in 1892–'93 there was a decided decrease, amounting to nearly $100,000 in the twelve months ending in March of this year. This falling off represents a failure on the part of the drug-consuming public to buy three millions of packages—bottles or boxes—of medicines having a selling value of $750,000. The Pharmaceutical Society has in part been responsible for this remarkable change. The Society has lately been insisting on the enforcement of a regulation that requires all patent compounds that contain poisonous drugs to bear a poison label. This has had the effect of embarassing the sales of that particular line of nostrums and of scaring off many consumers. The scare is beneficial, not only because it affects primarily the more deadly of the patented compounds, but also because it engenders distrust, inquiry, and delay in regard to other purchases of substances that are not required to wear the poison label. It tends to throw a veil of suspicion over every department of nostrum-vending, and is for that reason a sort of indirect educator of a suffering public.—New York *Medical Journal.*

A Tibute to the Medical Profession of New York.—At the one hundred and twenty-fifth annual banquet of the Chamber of Commerce, of New York, President Charles S. Smith paid a just tribute to the doctors of the city. President Smith said: "The city of New York and the whole country are under obligations to this Chamber for their prompt action when, a year ago, this country was threatened by an invasion of cholera, and the character which this Chamber has established during the one hundred and twenty-five years of its existence for unselfish devotion to the public welfare enabled it to call upon the public for a subscription to meet a possible emergency, which was responded to in the amount of $195,000, all of which, with the exception of $20,000, was returned to the subscribers. It is also a pleasing duty to acknowledge in this connection [illegible]e important aid that was rendered to the Cham[illegible] by the Advisory Committee of Physicians of [illegible]e New York Academy of Medicine; and, gentle[illegible]en, it is not too much to say that there is no body

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of men in thu city of New York who give so freely and gratuitously of their time and services to the poor and suffering as do the medical men of New York. If, in the final analysis of human actions, character is the standard of success or failure, then the physicians of New York deserve to wear the laurel wreath."—*Med. Rec.*

Dr. Jos. Grindon has been elected to the Chair of Physiology at the St. Louis Medical College, vice Dr. Townsend W. Porter, resigned.

At a Recent Meeting of the Faculty of the Missouri Medical College, Dr. H. A. L. Rohlfing, Lecturer on Pathological Anatomy of that Institution, has been elected as "the Microscopist of the Faculty."

Planning a Hospital for Staten Island.—A number of ladies of Staten Island have arranged plans for the organization of a hospital, to be called Staten Island Hospital. It is intended to open the hospital soon. Nine physicians on the island have signified their consent to become members of its staff.

As Soon as Possible after the first day of January, 1894, Dr. Joseph M. Mathews, Professor of Surgery and Clinical Lecturer on Diseases of the Rectum in the Kentucky School of Medicine of Louisville, Ky., will edit and have issued a quarterly journal entitled *Mathew's Medical Quarterly*, devoted to diseases of the rectum and gastro intestinal diseases, rectal and gastro intestinal surgery.

A Lunatic shot the Mayor of Chicago. There is nothing surprising in this or in any act of lunacy. The surprising thing is that when medical men advocate the commitment of lunatics to an asylum before the crimes are committed, the newspaper editors raise the cry of infringement of personal liberty. Even now there is pending a law to prevent the exclusion of the insane on the testimony of medical men. The hope of civilization lies in the education of the average newspaper editor.—Ohio *Medical Journal.*

St. Louis Microscopical Society.—The St. Louis Microscopical Society held its annual meeting Thursday, December 22, 1893, at which the following officers were elected for the ensuing year:

President—Dr. L. T. Riesmeyer.
Vice President—Dr. H. A. L. Rohlfing.
Secretary and Librarian—Dr. Frank Heitzig.
Treasurer—Dr. W. L. Blickhahn.

A Spanish Medical Association.—A medical association for the protection of the interests of the profession and the fostering of professional brotherhood has been founded in Madrid, under the title of "Association del Colegio Medico de Madrid." The meeting for organization was held under the Presidency of Dr. Julian Oalleja, Dean of the Faculty of Medicine and a member of the Spanish Senate. Among the members of the provisional committee of management are the Marquis de Guadalerzas, the editor of the *Siglo Medico*, Dr. Angel Pulido, and most of the leaders of the profession in the Spanish capital.

The Gasconade Closed for the Winter.—R. C. Beaty announces that the Gasconade is closed for the winter and that the medical offices and laboratories have been moved to 3603 Lindell Boulevard, St. Louis, Mo., where the Superintendent and head nurses will continue their sanitarium work as far as practicable. The House will re-open about March 1, 1894. In view of the agreement and earnest desire to entertain the members of the State Medical Association at its next meeting, the Company deems it right and necessary to issue this notice to the medical profession.

Any physician desiring information or illustrated catalogue concerning the Gasconade Sanitarium is respectfully invited to call or address them at their St. Louis office.

Women Physicians in Turkey.—Judge Terrell, the United States Minister, has just gained a notable diplomatic victory. For several years the number of female physicians in Turkey has been increasing, notwithstanding the fact that Turkish law refused to recognize them as legitimate practitioners. Foremost among them have been the American missionaries, who have repeadly won the highest praise for their self-denying work. They have, however, been greatly hampered by the fact that they could not secure regular Turkish diplomas, and the various foreign embassies have been very earnest in their efforts to gain for them official recognition. Hitherto they have failed entirely, but at last Turkish conservatism has yielded, and to the American Embassy belongs the honor of securing what neither Russian, French, British, nor German Ambassadors could gain. —*Med. Rec.*

Prize of the American Neurological Association.—The American Neurological Association offers a prize of $200 for the best essay on any subject connected with Neurological Science. This competition is open to physicians who are legal resident of States in North and South America. Essays must be sent to the Secretary of the Association on or before the first day of May, 1894. Each essay shall be accompanied by a sealed enveloped containing the name and address of the author, and bearing on the outside a motto, which shall also be inscribed upon the essay. Essays shall be type-written, in either the English or French languages, and with the pages securely fastened. The Council of the Association reserves the right to reject any or all essays judged unworthy of the award. Each essay must exhibit original research, and none will be accepted that has previously been published. Graeme M. Hammond, M.D., Secretary, 58 West Forty-fifth St., New York City.

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